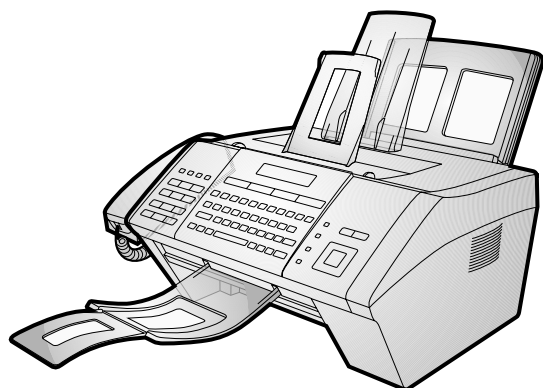


SHARP SERVICE MANUAL

No. 00ZFIS125NSME



FACSIMILE MODEL FO-IS125N

MODEL	SELECTION CODE	DESTINATION
FO-IS125N	U	U.S.A.

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Parts Guide

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

CHAPTER 1. GENERAL DESCRIPTION

[1] Caution

1. Laser caution

This laser facsimile is a class 1 laser product that complies with 21CFR 1040.10 and 1040.11 of the CDRH or IEC60825-1 standard. This means that this machine does not produce a hazardous laser radiation. The use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This laser radiation isn't a danger to the skin, but when an exact focusing of the laser beam is achieved on the eyes retina, there is danger of spot damage to the retina.

The following cautions must be observed to avoid exposure of the laser beam to your eyes at the time of servicing.

- 1) When a problem in the laser optical unit has occurred, the whole optical unit must be exchanged as a unit, not an individual part.
- 2) Do not look into the machine with the main switch turned on after removing the toner/developer unit and drum cartridge.
- 3) Do not look into the laser beam exposure slit of the laser optical unit with the connector connected when removing and installing the optical system.
- 4) The cover of Laser Printer Unit contains the safety interlock switch.

Do not defeat the safety interlock by inserting wedges or other items into the switch slot.

Laser Wave Length : 780 nm +15/-10 nm

Laser Pulse Times : 12.00 μ s/7 mm

Laser Output Power : 0.15 mW \pm 0.04mW

2. Life of consumable

Section	Part	Estimated Life	Replaced by
Toner cartridge	Replacement cartridge (FO-25ND)	3,000 prints (at Letter/5% chart)	User
Drum cartridge	Replacement cartridge (FO-25DR)	20,000 prints (at Letter/5% chart)	User
Paper feed	Transfer roller (Refer to the P/G No. 1-27) (NROLR2565XHZZ)	50,000 prints	Service Engineer
Fuser	Fusing unit (Refer to the P/G No. 6-901) (CFRM-2265XH04)	50,000 prints	Service Engineer
Paper transport	Feed roller (Refer to the P/G No. 3-25) (NROLR2562XHZZ)	Cleaning as needed	-
Unit	FO-IS125N	5 years or 50,000 prints of early either	-

3. Caution for Battery replacement

(Danish) ADVARSEL !

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's instructions.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING

Explosionsfare vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrektter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

4. Precautions for using Lead-Free Solder

1. Employing lead-free solder

This model employs lead-free solder.

This is indicated by the "LF" symbol printed on the PWB and in the service manual.

The suffix letter indicates the alloy type of the solder.

Example:

LFa
Sn-Ag-Cu

Indicates lead-free solder of tin, silver and copper.

2. Using lead-free solder

When repairing a PWB with the "LF" symbol, only lead-free solder should be used. (Using normal tin/lead alloy solder may result in cold soldered joints and damage to printed patterns.)

As the melting point of lead-free solder is approximately 40°C higher than tin/lead alloy solder, it is recommended that a dedicated bit is used, and that the iron temperature is adjusted accordingly.

3. Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is higher and has poorer melting point (flow), to prevent damage to the land of the PWB, extreme care should be taken not to leave the bit in contact with the PWB for an extended period of time. Remove the bit as soon as a good flow is achieved.

The high content of tin in lead free solder will cause premature corrosion of the bit.

To reduce wear on the bit, reduce the temperature or turn off the iron when it is not required.

Leaving different types of solder on the bit will cause contamination of the different alloys, which will alter their characteristics, making good soldering more difficult.

It will be necessary to clean and replace bits more often when using lead-free solder. To reduce bit wear, care should be taken to clean the bit thoroughly after each use.

[2] Specifications

Print specifications

Toner cartridge yield* (continuous printing, 5% page coverage, letter paper):	Initial starter cartridge (included with machine): Approx. 1500 pages Replacement cartridge (FO-25ND): Approx. 3000 pages
Drum cartridge yield* (continuous printing, 5% page coverage, letter paper):	Initial starter cartridge (included with machine): 20,000 pages (average) Replacement cartridge (FO-25DR): 20,000 pages (average)
Paper tray capacity:	Letter: Approx. 250 sheets (20-lb. copier paper at room temperature; maximum stack height should not be higher than the line on the tray) Legal: 100 sheets Recommended paper weight: 20-lb. Copy Bond
Printer type:	Laser
Print resolution:	600 x 600 dpi (dots per inch)
Effective printing width:	8.2" (208 mm) max.
PC print speed:	12 ppm (pages per minute)

*The yields may vary depending on coverage and operating conditions.

Fax specifications

Memory capacity*:	Approximately 500 average pages
Modem speed:	33,600 bps with auto fallback to lower speeds.
Transmission time*:	Approx. 3 seconds
Compatibility:	ITU-T (CCITT) Super G3, G3 mode
Compression scheme:	MR, MH, MMR
Applicable telephone line:	Public switched telephone network
Reception modes:	AUTO, MANUAL
Scanning resolution:	Horizontal: 203 lines/inch (8 lines/mm) Vertical: Standard: 98 lines/inch (3.85 lines/mm) Fine /Halftone: 196 lines/inch (7.7 lines/mm) Super fine: 391 lines/inch (15.4 lines/mm)
Halftone (grayscale):	64 levels
Contrast control:	Automatic/Dark selectable

*Based on Sharp Standard Chart at standard resolution, excluding time for protocol signals (i.e., ITU-T phase C time only).

Network and general specifications

Automatic document feeder:	Letter/A4: 30 sheets max. (20-lb. paper) Legal: 5 sheets max.
Input document size:	Automatic feeding: Width: 5.8" to 8.5" (148 to 216 mm) Length (30 sheets): 5.5" to 11" (140 to 279 mm) Length (5 sheets): 5.5" to 14" (140 to 356 mm) Manual feeding: Width: 2.75" to 8.5" (70 to 216 mm) Length: 5.5" to 14" (140 to 356 mm)
Effective scanning width:	8.2" (208 mm) max.
Storable transmission destinations:	Rapid Keys: 36 Speed Dial numbers: 114
Telephone function:	Yes (cannot be used if power fails)
Copy function:	Single/Multi/Sort (up to 99 copies per page)
Network interface:	10 Base-T, 100 Base-TX
Network frame type:	IEEE802.2/IEEE802.3 Ethernet II
Network protocol:	TCP/IP
Supported operating systems:	Windows® 2000, XP, Vista (Printer driver also supports Windows® Server 2003)
Scan to E-mail:	Yes
Scan to Network Folder:	Yes
Global Address Search:	Yes (requires LDAP server)
User authentication:	Yes
File formats:	TIFF (G4), PDF (G4)
Display:	LCD display, 20 digits x 2 lines
Power requirements:	120 V AC, 60 Hz
Power consumption:	Standby: 8.6 W, Maximum: 690 W
Operating temperature:	50 - 86°F (10 - 30°C)
Humidity:	25 - 85% RH

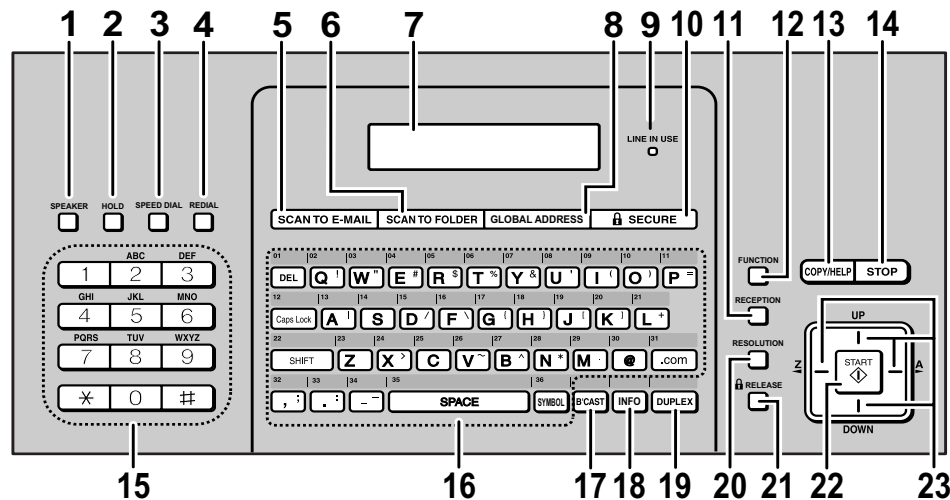
Dimensions (without attachments):	Width: 16.8" (426 mm)
	Depth: 16.1" (410 mm)
	Height: 8.2" (208 mm)
Weight (with attachments):	Approx. 15.6 lbs. (7.1 kg)

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

Trademark information

- Microsoft, Windows and Internet Explorer are trademarks of Microsoft Corporation in the U.S.A. and other countries.

[3] Operation panel

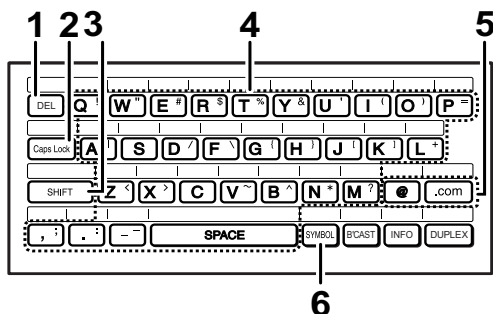


Note: Affix the Rapid Key labels as shown above.

- 1. SPEAKER key:** Press to listen to the line and fax tones through the speaker when faxing. Note: **This is not a speakerphone.** It cannot be used for speaking.
- 2. HOLD key:** Press to put a phone call on hold.
- 3. SPEED DIAL key:** Press to select a fax or e-mail destination stored in a 3-digit Speed Dial number.
- 4. REDIAL key:** Press to automatically redial the last number dialed.
- 5. SCAN TO E-MAIL key:** Press to send a document to an e-mail recipient.
- 6. SCAN TO FOLDER key:** Press to send a document to a folder on a computer on the same network as the machine, or to an FTP server.
- 7. Display:** This displays messages to help you operate the machine.
- 8. GLOBAL ADDRESS key:** Press to search for a destination in a global address book on an LDAP server.
- 9. LINE IN USE light key:** This lights up when the machine is using the phone line to send or receive a fax.
- 10. SECURE key:** Press to set up and use the security functions of the machine.
- 11. RECEPTION key:** Press to select the reception mode (AUOT or MANUAL) for receiving faxes. The selected mode will appear on the display.
- 12. FUNCTION key:** Press this key followed by the arrow keys to select special functions and settings.

- 13. COPY/HELP key:** When a document is in the feeder, press to make a copy. At any other time, press to print the Help List.
- 14. STOP key:** Press to cancel an operation before it is completed.
- 15. Number key:** Use these keys to dial numbers, and enter numbers when storing transmission destinations.
- 16. Rapid keys/Letter keys:** A fax number, e-mail address, on network folder can be stored in each of these keys for one-touch selection (attach the Rapid Key labels). When entering text, the keys are used as letter keys.
- 17. BROADCAST key:** Press to send to multiple fax or e-mail destinations.
- 18. INFO key:** Press to check various types of machine information.
- 19. DUPLEX key:** Use to scan two-sided documents for transmission and copying.
- 20. RESOLUTION key:** When a document is in the feeder, press to adjust the scanning resolution for transmission.
- 21. RELEASE key:** When a fax has been received to memory instead of being printed out because the Secure Fax function has been activated, press this key to enter the Secure code and print out the fax.
- 22. START key:** Press after dialing to send a fax.
- 23. Arrow key:** Use to scroll through and select settings, and to search for stored destinations.

Letter keys

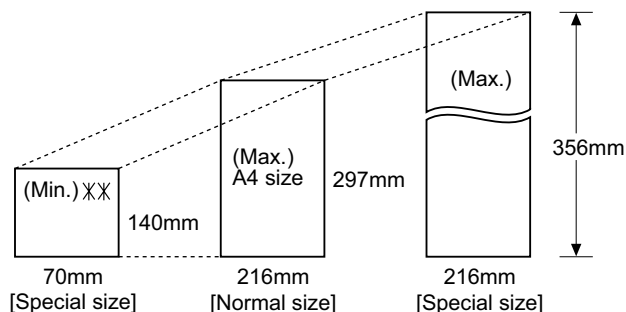


- 1. DEL key:** Press to delete the character marked by the cursor. When the cursor is to the right of a line of text, press to backspace and clear characters. (The cursor can be moved by pressing or .) To delete all entered characters, hold down until all characters are cleared.
- 2. Caps Lock key:** Press to enter upper case letters. Press again to return to lower case letter entry.
- 3. SHIFT key:** Hold down while pressing a letter key to temporarily change case.
- 4. Letter keys:** Use to enter letters.
- 5. @ key, .com key:** Press to conveniently enter "@" and ".com" when entering an e-mail address.
- 6. SYMBOL key:** Hold down while pressing a letter key to enter the symbol that appears on the right side of the key.

[4] Transmittable documents

1. Document Sizes

Normal size	Width	148 - 216 mm
	Length	140 - 297 mm



XX Use document carrier sheet for smaller documents.

- With special sizes, only one sheet can be fed into the machine at a time. Insert next page into feeder as current page is being scanned.

2. Paper Thickness & Weight

	Indication	Product specifications	
		Lower Limit	Upper Limit
Weight indication	Metric system indication	52g/m ²	80g/m ²
Thickness indication	Metric system indication	0.06mm	0.1mm
Document size	Document size Range	Minimum (148mm x 70mm)	
		A4 (210mm x 297mm)	
		Letter (216mm x 279mm)	
Number of ADF sheets	Document size Weight	Legal (216mm x 356mm)	
		Minimum ~ Letter/A4 size 30sheets	
		Legal 5 sheets	
Paper quality	Kind	More than 90 kg	
		Below 135 kg 1 sheet	
Paper quality	Kind	Paper of fine quality/bond paper/	
		Kent paper	

3. Document Types

- Normal paper
 - Documents handwritten in pencil (No. 2 lead or softer), fountain pen, ball-point pen, or felt-tipped pen can be transmitted.
 - Documents of normal contrast duplicated by a copying machine can also be transmitted.
- Diazo copy (blue print)
- Diazo copy documents of a normal contrast may be transmitted.
- Carbon copy
 - A carbon copy may be transmitted if its contrast is normal.

4. Cautions on Transmitting Documents

- Documents written in yellow, greenish yellow, or light blue ink cannot be transmitted.
- Ink, glue, and correcting fluid on documents must be dry before the documents can be transmitted.
- All clips, staples and pins must be removed from documents before transmission.
- Patched (taped) documents should be copied first on a copier and then the copies used for transmission.
- All documents should be fanned before insertion into the feeder to prevent possible double feeds.

5. Automatic Document Feeder Capacity

Number of pages that can be placed into the feeder at as follows:

Letter/A4: 30 sheets max. (20lb. paper)

Legal: 5 sheets max.

- Temperature: 50 ~ 86°F (10 ~ 30°C)
- Humidity: 25 ~ 85%

NOTE: • When you need to send or copy more pages than the feeder limit, place additional pages in feeder when last page in feeder is being scanned.

- Place additional pages carefully and gently in feeder. If force is used, double-feeding or a document jam may result.

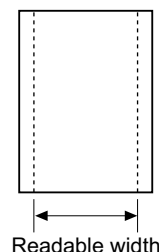
6. Readable Width & Length

The readable width and length of a document are slightly smaller than the actual document size.

Note that characters or graphics outside the effective document scanning range will not be read.

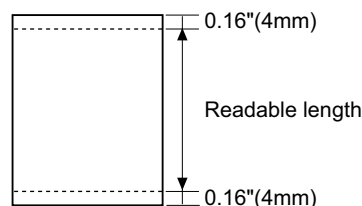
• Readable width

8.2" (208mm), max



• Readable length

This is the length of the document sent minus 0.16"(4mm) from the top and bottom edges.



[5] Installation

1. Site selection

Take the following points into consideration when selecting a site for this model.

ENVIRONMENT

- The machine must be installed on a level surface.
- Keep the machine away from air conditioners, heaters, direct sunlight, and dust.
- Provide easy access to the front, back, and sides of the machine. In particular, keep the area in front of the machine clear, or the original document may jam as it comes out after scanning.
- The temperature should be between 50 - 86°F (10 - 30°C).
- The humidity should be between 25% and 80% (without condensation).

ELECTRICITY

AC 120 V, 60Hz, grounded AC (3-prong) outlet is required.

Caution!

- Connection to a power source other than that specified will cause damage to the equipment and is not covered under the warranty.
- If your area experiences a high incidence of lightning or power surges, we recommend that you install a surge protector for the power and telephone lines. Surge protectors can be purchased at most telephone specialty stores.

If the machine is moved from a cold to a warm place...

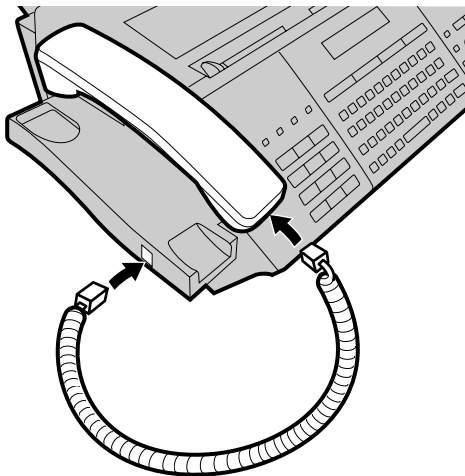
Condensation may form on the reading glass if machine is moved from a cold to a warm place, this will prevent proper scanning of documents for transmission. Turn on the power and wait approximately 2 hours before using machine.

TELEPHONE JACK

A standard telephone jack must be located near the machine. This is the telephone jack commonly used in most homes and offices.

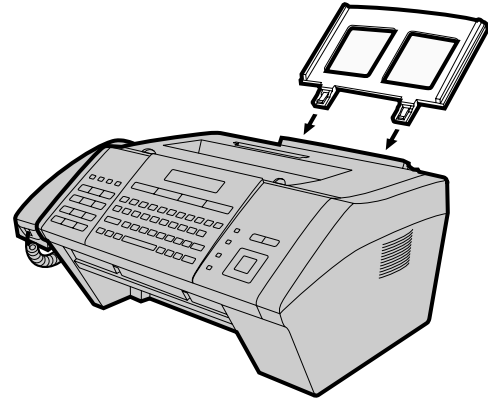
- The language is unclear in this part. Perhaps it could say:
"Plugging the fax machine into a jack which is not a standard analog telephone jack, may result in damage to the machine or your telephone system."

2. Connecting the handset

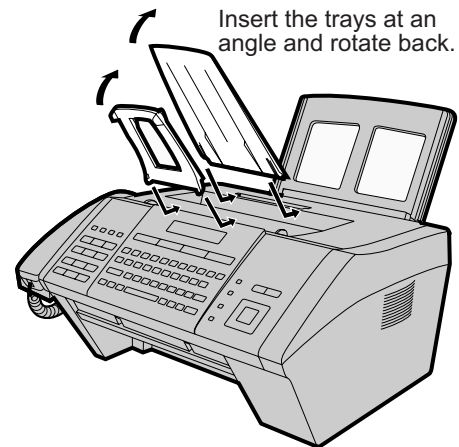


3. Attaching the tray

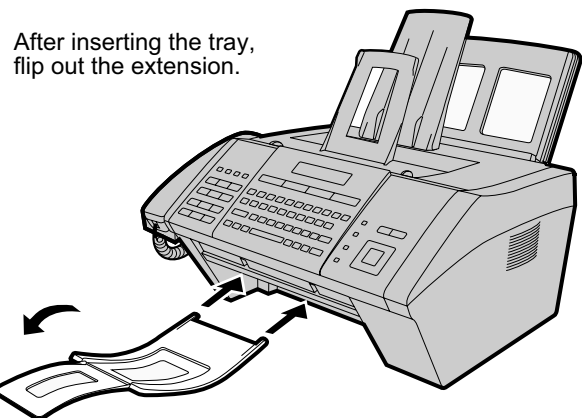
- 1) Attach the paper tray.



- 2) Attach the document feeder tray and the received document tray.



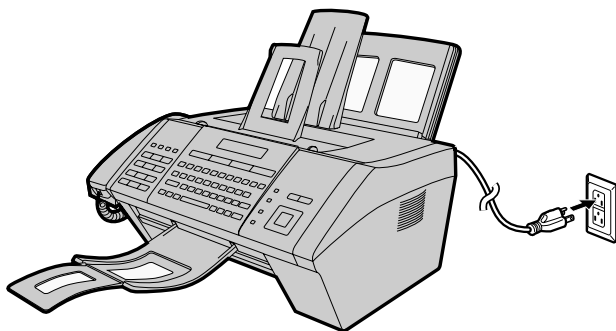
- 3) Attach the document exit tray.



4. Connecting the power cord

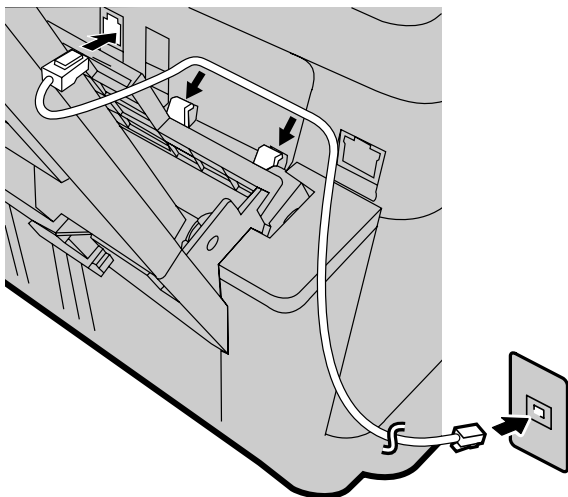
Plug the power cord into a 120 V, 60 Hz, grounded AC (3-prong) outlet.

- Do not plug the power cord into any other kind of outlet. This will damage the machine and is not covered under the warranty.



5. Connecting the telephone line cord

Insert one end of the line cord into the socket on the back of the machine marked TEL. LINE. Insert the other end into a wall telephone socket.



The machine is initially set for tone dialing. If you are on a pulse dial line, change the "DIAL MODE" setting.

6. Affixing the rapid key labels

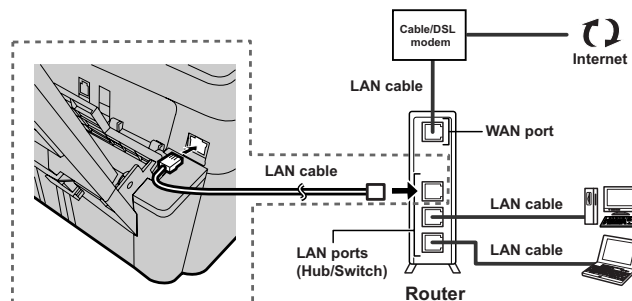
Affix each strip of Rapid Key labels above each row of letter keys as shown in the panel illustration.

7. Connecting the machine to your network

To use the Scan to E-mail and Scan to Folder functions, and to use the machine as a printer, you must connect the machine to an Ethernet network. In addition, to use Scan to E-mail, the network must have an Internet connection. A typical setup is shown below.

The machine is connected using an Ethernet cable (not included). Please purchase a 10Base-T/100Base-TX straight-through (regular) cable.

Connect one end of the cable to the LAN port on the machine. Connect the other end to a LAN port on your switch or hub.



- If you are uncertain which port to connect the cable to, see the manual for the router, switch or hub.
- The connections can be made with all devices powered on.

To communicate on your network, the machine must have an IP address. To set the machine's IP address and configure other network settings.

8. Installing the toner cartridge and drum cartridge

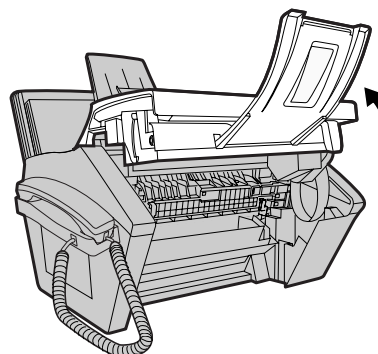
The laser printer in the machine uses a toner cartridge and a drum cartridge.

- The starter toner cartridge included with the machine can print approximately 1500 letter-size pages at 5% page coverage.
- When replacing the toner cartridge, use a **SHARP FO-25ND** toner cartridge. One cartridge can print about 3000 letter-size pages at 5% coverage.
- The drum cartridge can print approximately 20,000 letter-size pages. When replacing the drum cartridge, use a **SHARP FO-25DR** drum cartridge.

Follow the steps below to install the toner cartridge and the drum cartridge.

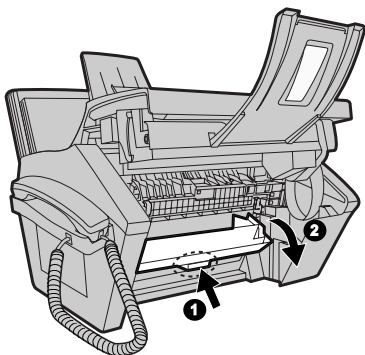
Note: The quality of the toner cartridge is guaranteed for 18 months after the date of manufacture indicated on the package. The quality of the drum cartridge is guaranteed for 24 months after the date of manufacture indicated on the package.

- Open the top cover of the machine.

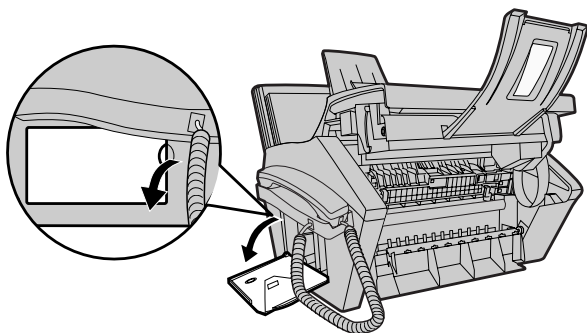


Caution! The fusing unit inside the print compartment becomes very hot during operation. Do not touch the inside of the print compartment after the machine has been in operation.

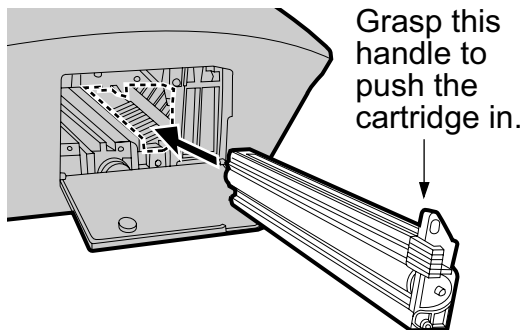
- 2) Press the release (**1**) and open the front cover (**2**).



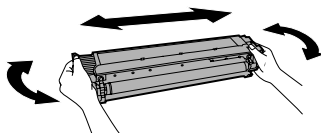
- 3) Open the side cover.



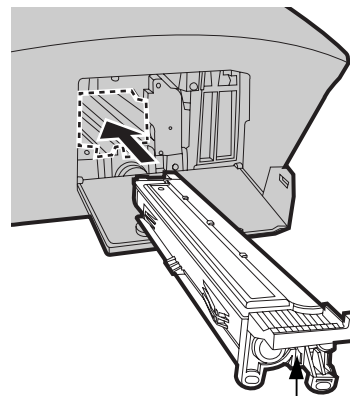
- 4) Remove the new drum cartridge from its packaging.
5) Insert the drum cartridge into the print compartment, sliding it along the guides.



- Do not touch or allow other objects to contact the drum (the green cylinder). This may damage the drum. If fingerprints, dust, or other contaminants get on the drum, wipe it gently with a clean cloth.
 - Exposure to light for more than several minutes will damage the drum. Be sure to insert the drum cartridge promptly into the machine.
 - If you find it necessary to leave the cartridge out of the machine for more than several minutes, wrap the cartridge in black paper.
- 6) Remove the new toner cartridge from its packaging. Shake the cartridge side to side four or five times to distribute the toner evenly within the cartridge.

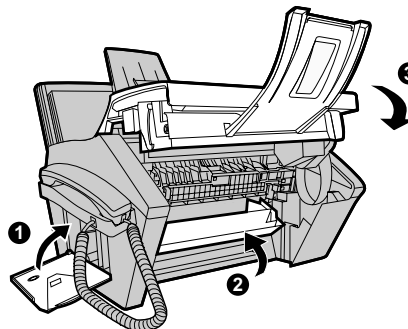


- 7) Grasp the cartridge handle and insert the toner cartridge into the print compartment, sliding it along the guides.



Grasp this handle to insert the cartridge.






- Make sure the cartridge “clicks” into place.
 - Do not touch the roller in the toner cartridge.
- 8) Close the side cover (**1**), the front cover (**2**), and the top cover (**3**).



- Make sure the side cover is completely closed. Otherwise, light may enter the print compartment and damage the drum.
 - The display will show: **[TONER EXCHANGED?] / [1 = NEW, 2 = OLD]**
- 9) If you installed a new toner cartridge, press **1** to select NEW (this will reset the toner counter to zero).
- If you temporarily removed and then replaced an old toner cartridge for maintenance or other reason, **2** press to continue using the previous toner count. (Note: Be sure to press **2** or the machine will not alert you when the toner cartridge is out of toner.)
- 10) Press **START**.
- 11) If you installed a new drum cartridge, reset the drum counter as explained below.






9. Resetting the drum counter

Each time you install a new drum cartridge, follow the steps below to reset the drum counter to zero.

- 1) Press  and then  until [LIFE] appears in the display.
- 2) Press , then  until [CLEAR DRUM COUNTER] appears.
- 3) Press .

10. Manually resetting the toner counter

When a new toner cartridge is installed, the toner counter is reset in Step 9 on the previous page. The procedure below is normally not necessary; however, it can be used in the event that you need to reset the toner counter manually.

- 1) Press  and then  until [LIFE] appears in the display.
- 2) Press , then  until [CLEAR TONER COUNTER] appears.
- 3) Press .

11. Loading printing paper

You can load letter or legal size paper in the paper tray.

Maximum number of sheets

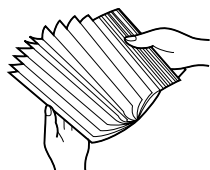
(20-lb. copy bond paper at room temperature)

Letter: Approx. 250 sheets

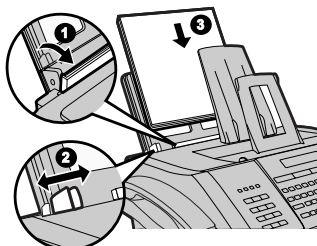
Legal size: 100 sheets

Caution! Do not use the blank side of paper that has already been printed on.

- 1) Fan the paper, and then tap the edges against a flat surface to even the stack.

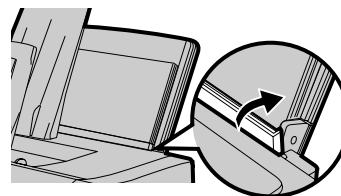


- 2) Pull the paper plate forward **1**. Squeeze the paper guide and adjust it to the width of the paper **2**. Insert the stack of paper into the tray, print side up **3**.



- Maximum stack height should not be higher than the line on the paper guide.


- 3) Push the paper plate back.



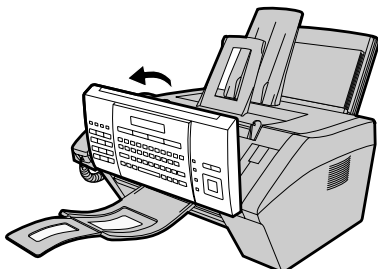
- If you loaded legal size paper (or you changed the paper size), change the paper size setting as explained.

[6] Clearing paper jams

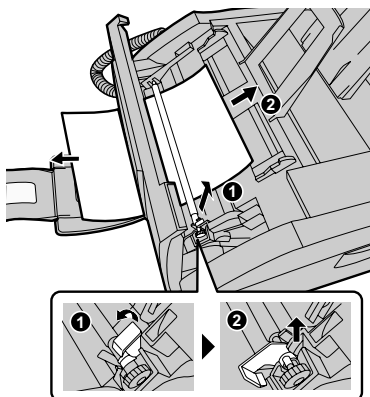
1. Clearing a jammed document

If the original document doesn't feed properly during transmission or copying, or [DOCUMENT JAMMED] appears in the display, first try pressing . If the document doesn't feed out, remove it as explained below.

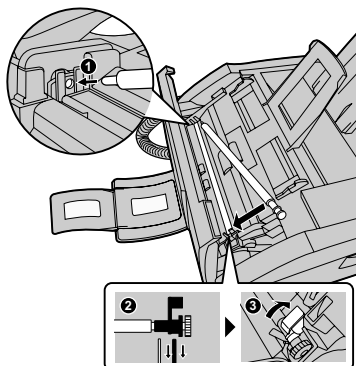
1) Open the operation panel.



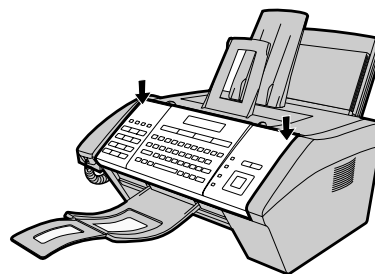
2) Rotate the lever so that it points straight up and pull it up (**1**).
Remove the document (**2**).



3) Make sure the left end of the roller is inserted correctly in its holder (**1**), and then push the right end of the roller down (**2**) and rotate the lever back down (**3**).

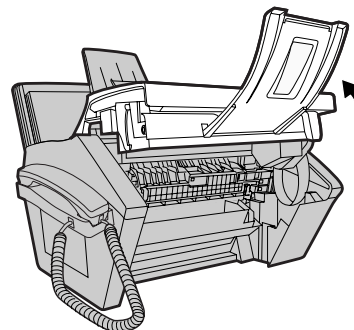


4) Close the operation panel, pressing down firmly on both sides to make sure it clicks into place.



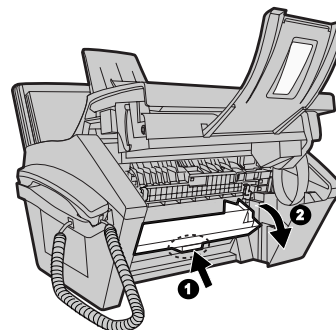
2. Clearing jammed printing paper

1) Open the top cover of the machine.

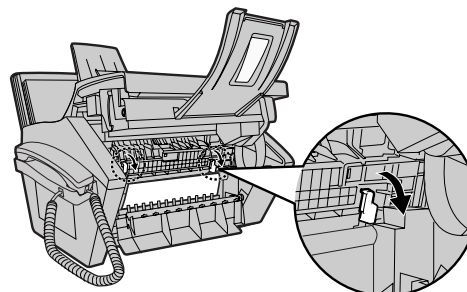


• **Caution!** The fusing unit inside the print compartment becomes very hot during operation. Do not touch the inside of the print compartment after the machine has been in operation.

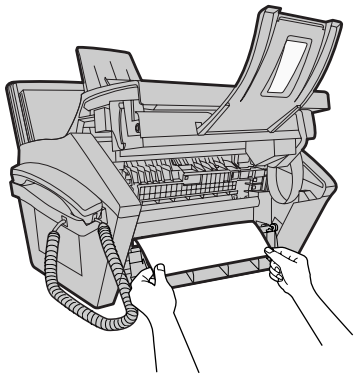
2) Press the release (**1**) and open the front cover (**2**).



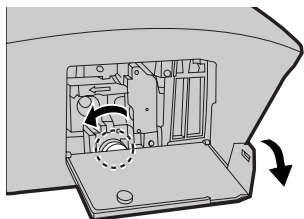
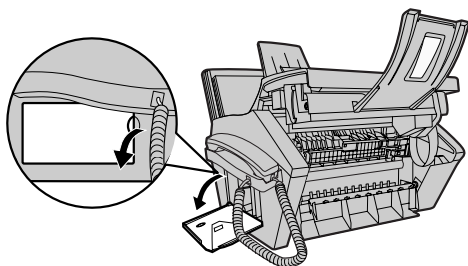
3) Push the two heater roller release levers down to release the heater roller.



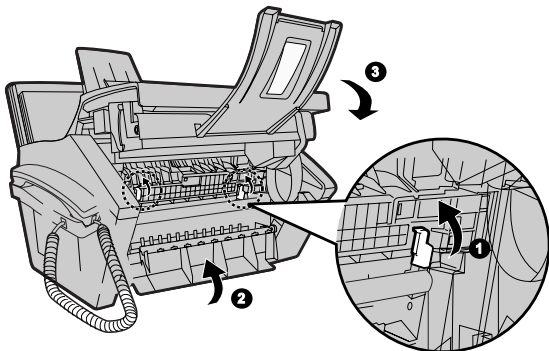
- 4) If the jammed paper is protruding from the front of the machine, gently pull it out. Take care not to tear the paper or leave any torn pieces of paper in the print compartment.



- If this clears the jam, go to Step 5.
 - If you are unable to clear the jam in this way, go to Step 4.
 - Take care not to touch or allow other objects to contact the drum (the green cylinder). This may damage the drum.
- 5) If the jammed page cannot be pulled out directly, open the side cover and rotate the white knob in the direction shown to feed out the jammed paper.



- 6) After the jammed paper has been removed, push the two heater roller release levers back up (**1**), close the side cover (**2**) (if you opened it), close the front cover (**3**) and then the close the top cover (**4**).



CHAPTER 2. ADJUSTMENTS

[1] Adjustments

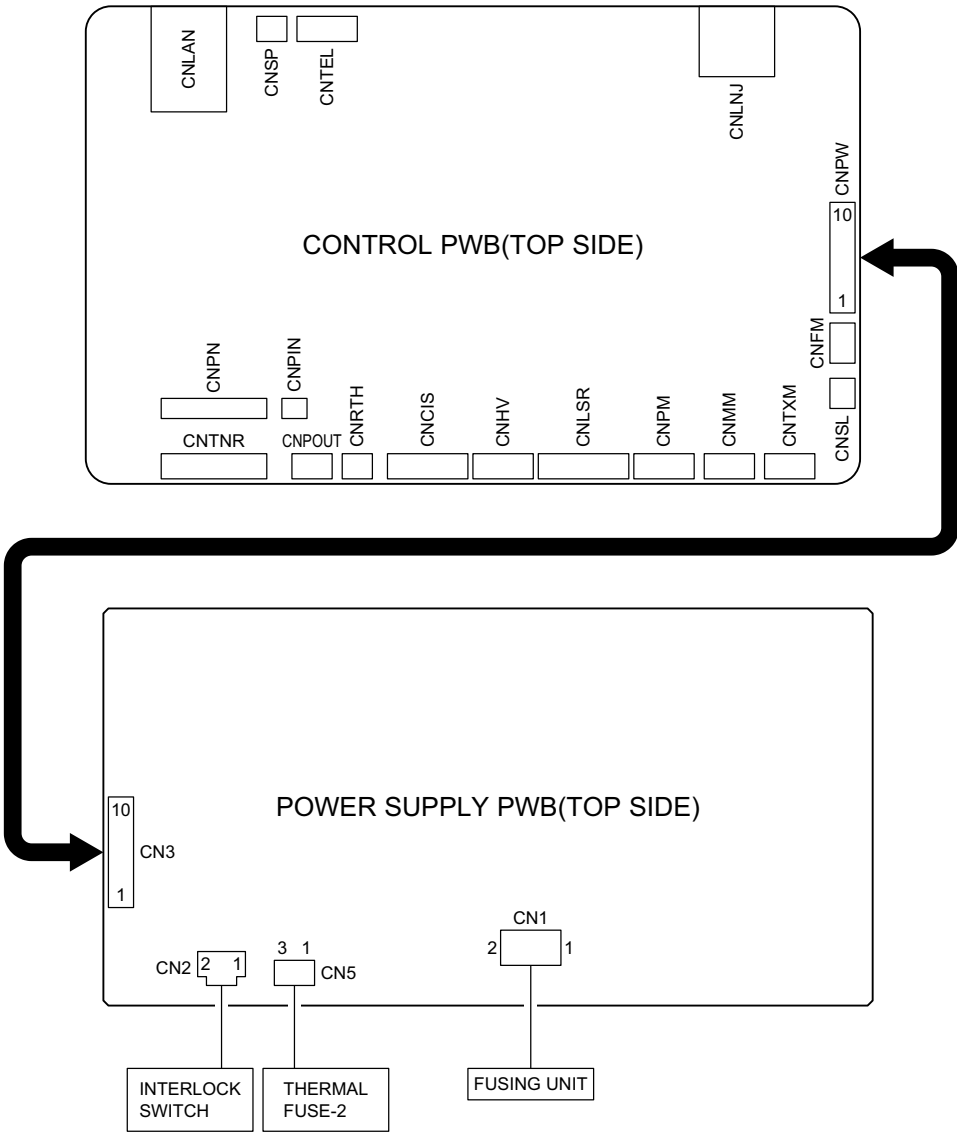
1. General description

Since the following adjustments and settings are provided for this model, make adjustments and/or setup as necessary.

2. Adjustments of output voltage (FACTORY ONLY)

- 1. Install the power supply unit in the machine.
- 2. Set the recording paper and document.
- 3. When the document is loaded, power is supplied to the output lines. Confirm that outputs are within the limits below.

2.1. Output voltage settings



Output		Voltage limits
+24VSUB		23.04V~24.96V
+24VMAIN		23.04V~24.96V (INTERLOCK SWITCH OFF: 0V)
Ach	STAND BY	4.3V~5.9V
	RATED	4.3V~6.3V

Connector		CNPW
Pin No.	CN3	
1	+24VSUB	
2	MG	
3	MG	
4	+24VMAIN	
5	+24VMAIN	
6	DG	
7	Ach(4VD)	
8	DG	
9	HEATER ON	
10	ZC	

Connector		CN5
Pin No.	CN5	
1	+24VMAIN	
2	N.C.	
3	+24VS	

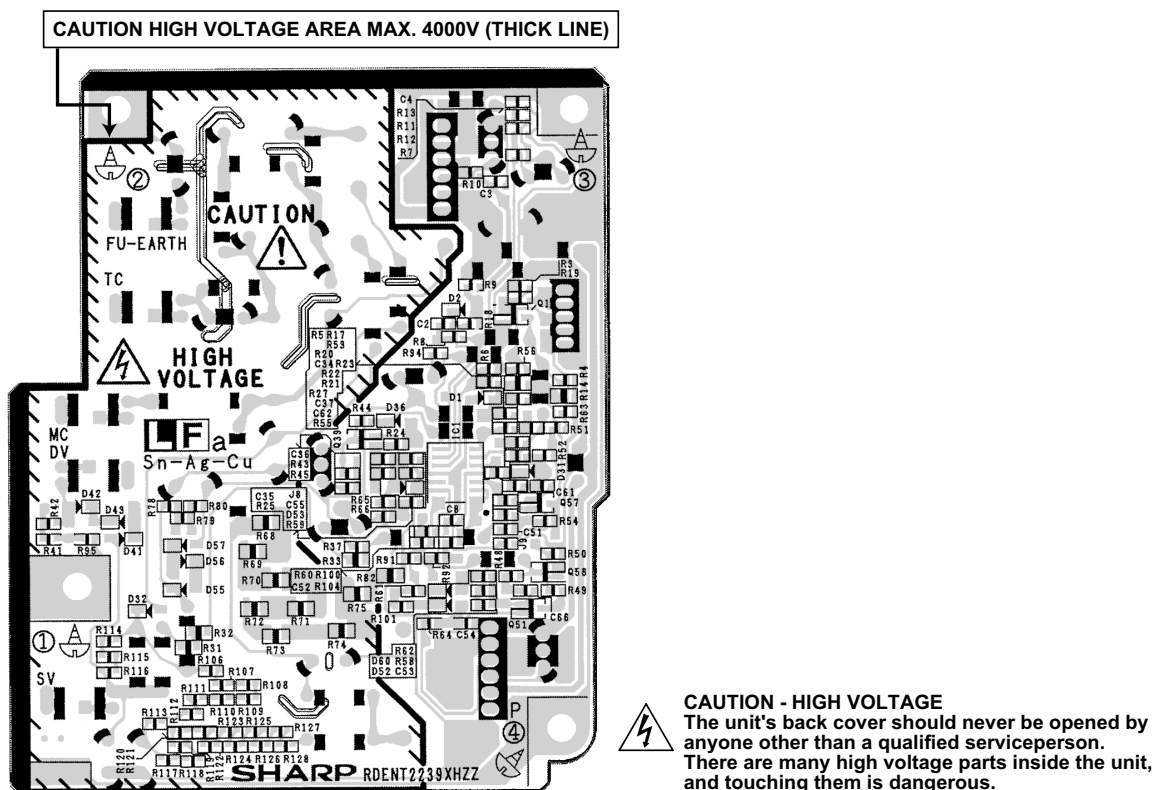
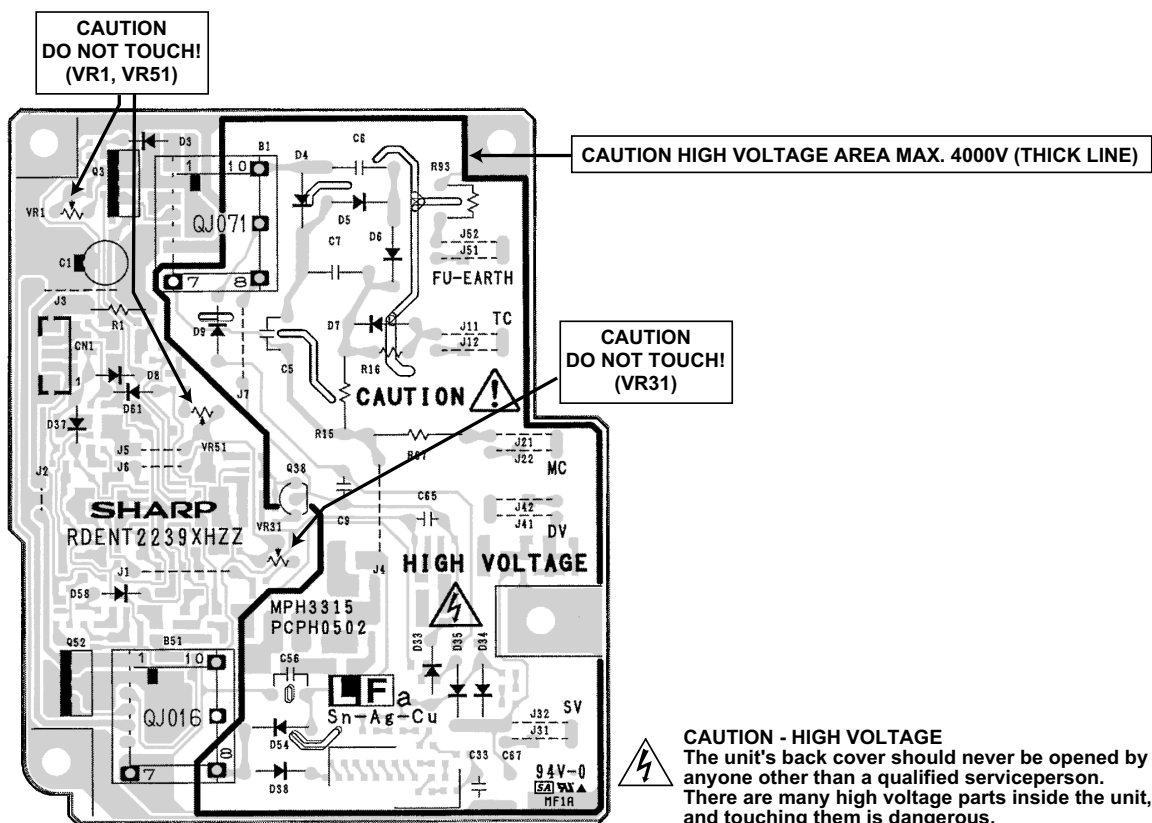
Connector		CN1
Pin No.	CN1	
1	AC NEUTRAL	
2	N.C.	
3	AC LIVE	

Connector		CN2
Pin No.	CN2	
1	+24VSUB	
2	+24VMAIN	

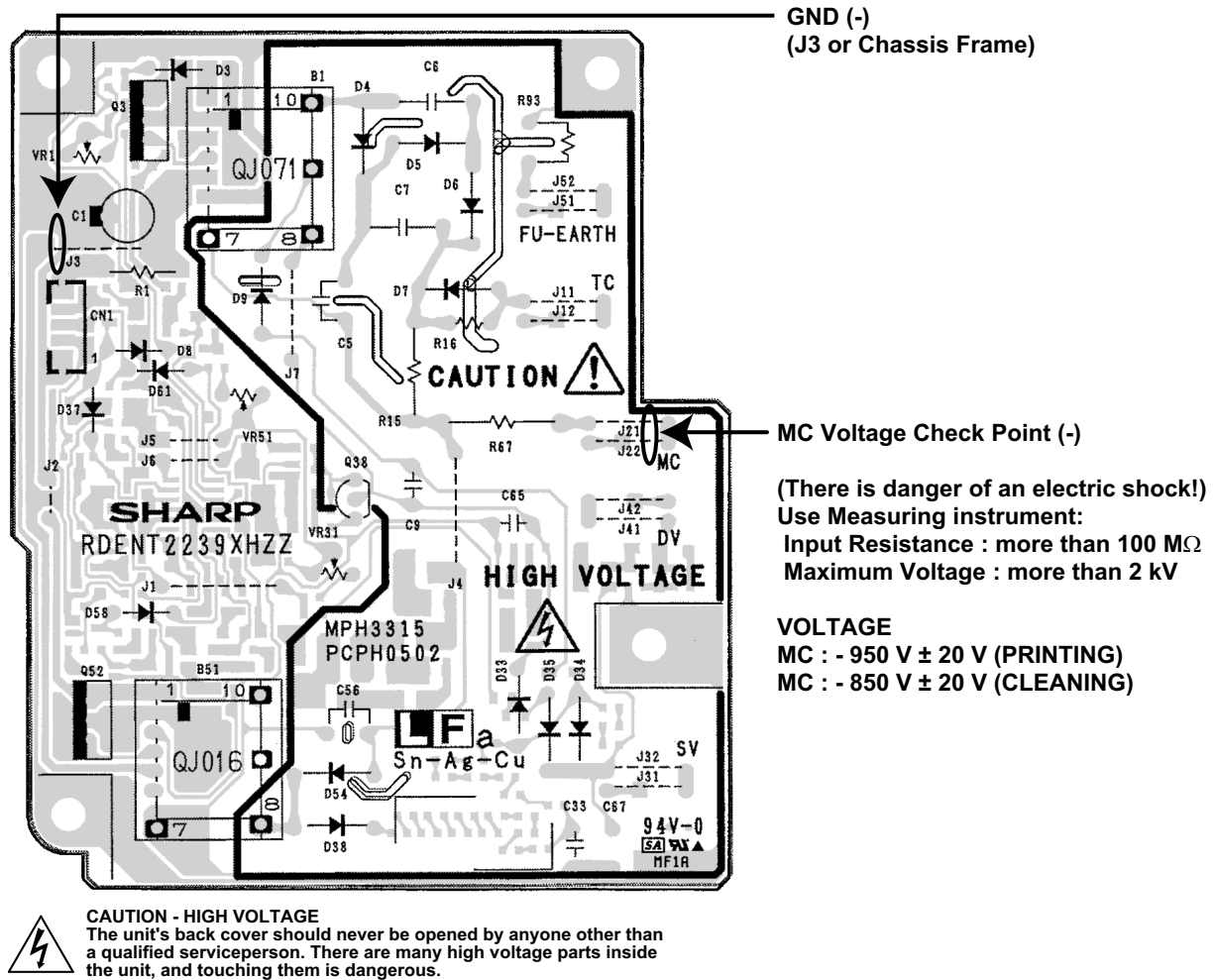
3. High voltage power check

3.1. General

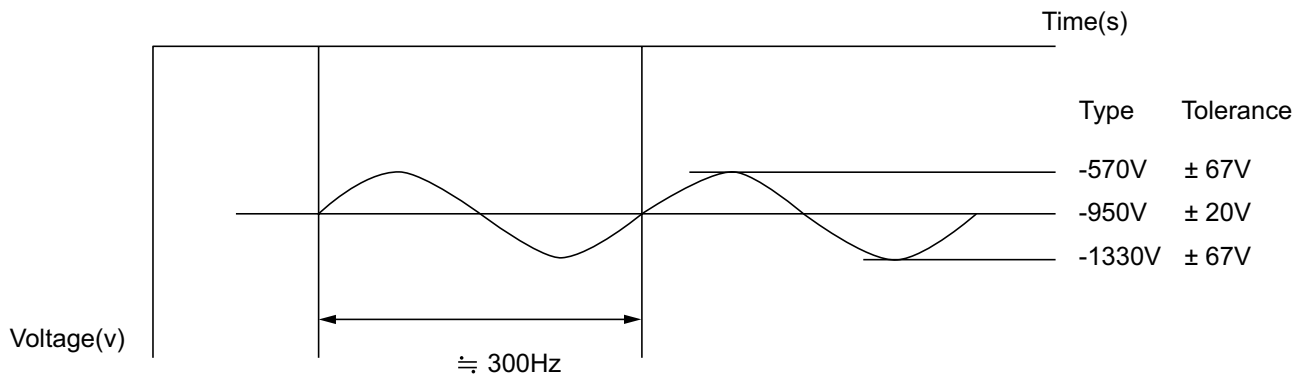
Note: Since the parts of this PWB cannot be supplied, change it as a unit.



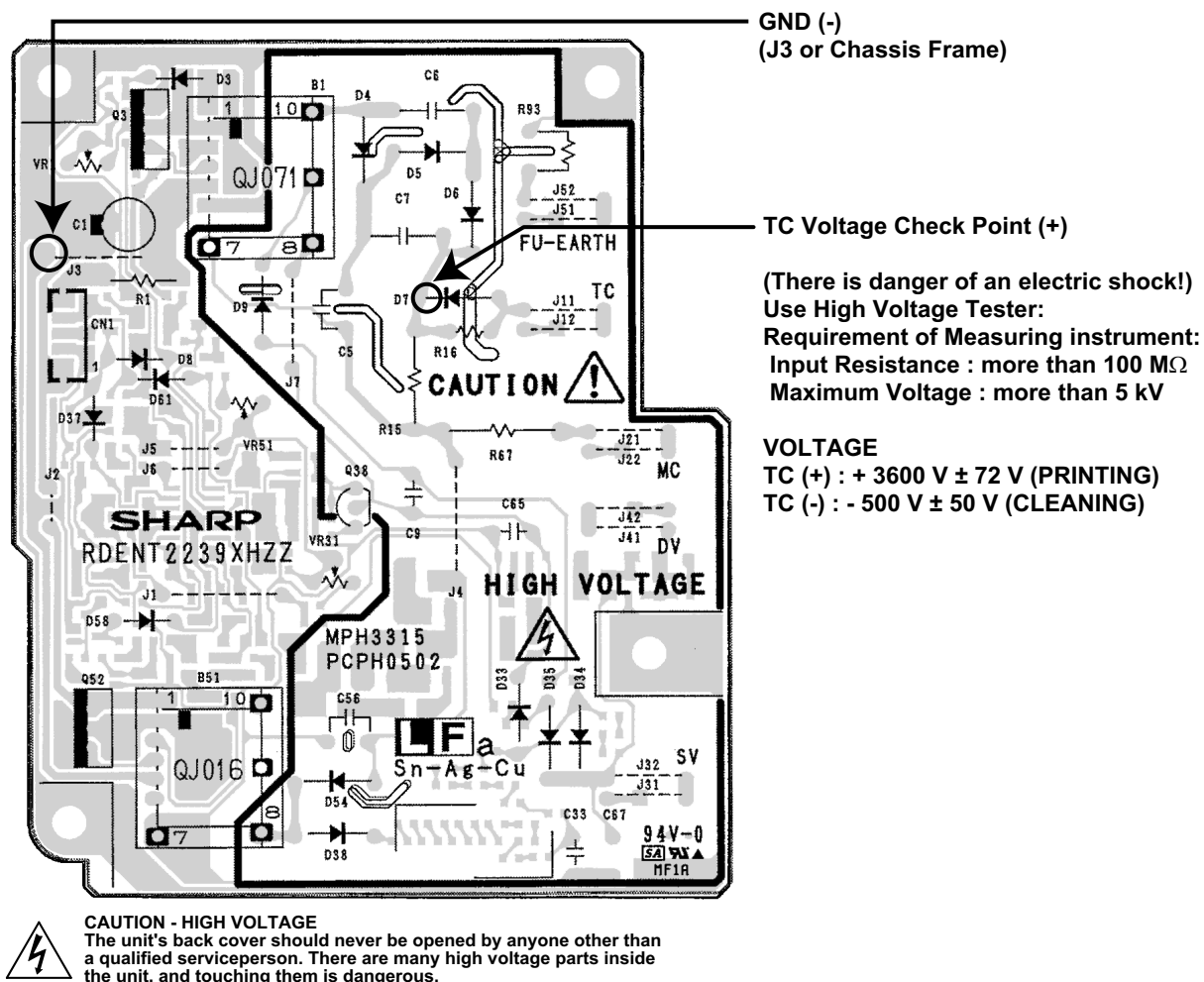
3.2. MC Voltage Check Point



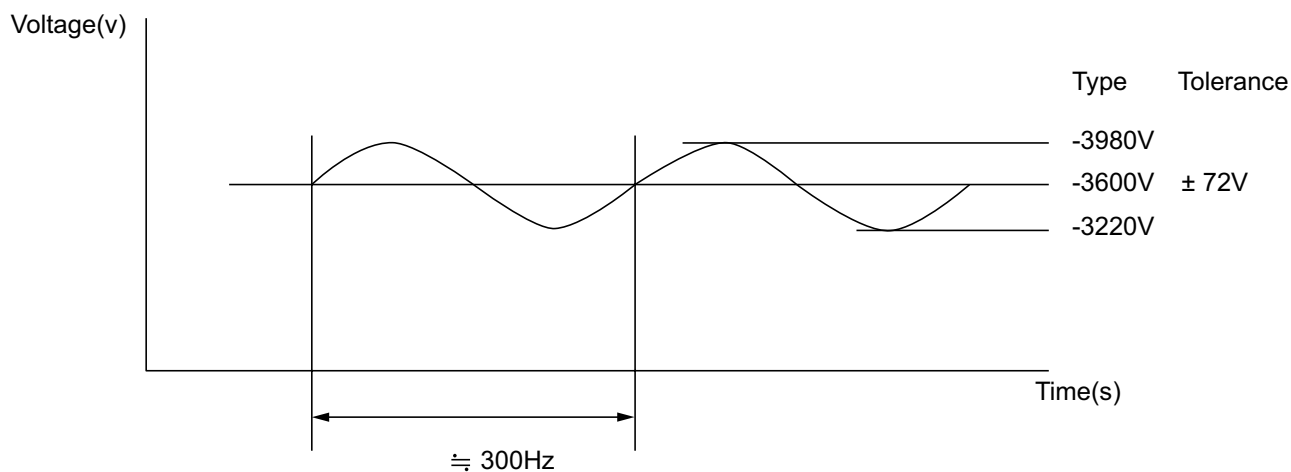
1) MC Voltage



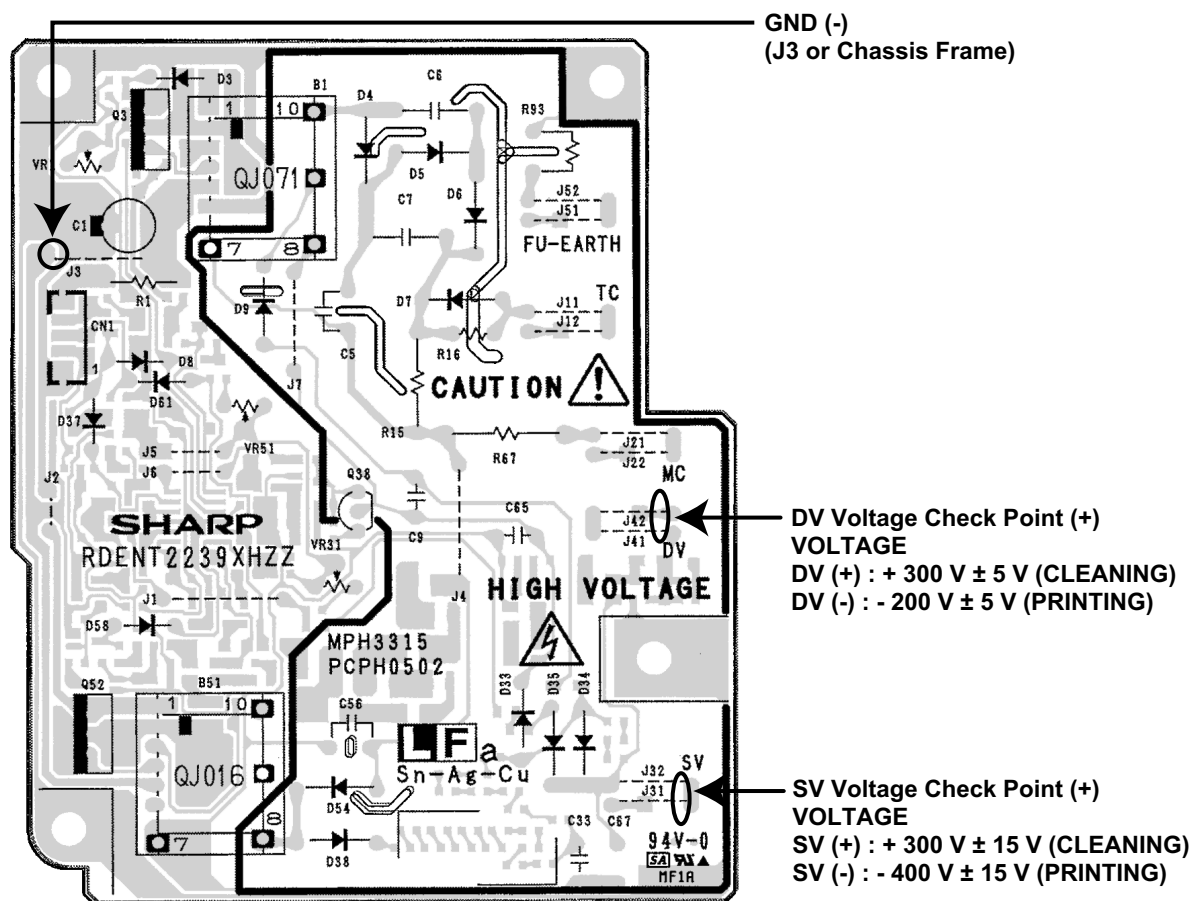
3.3. TC Voltage Check Point



1) TC Voltage



3.4. SV/DV Voltage Check Point and SV (-) Voltage Adjustment Volume

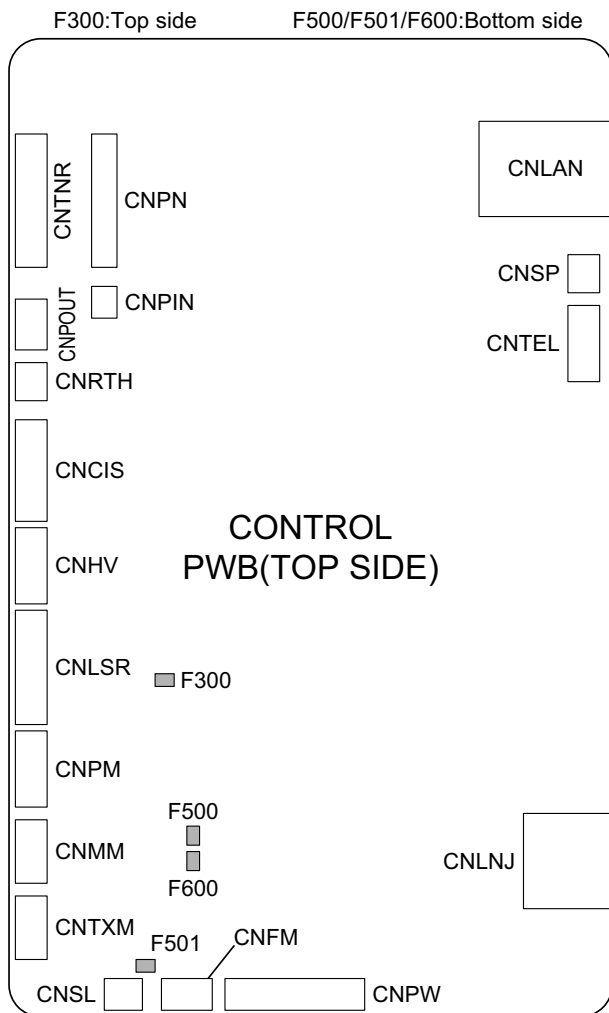


CAUTION - HIGH VOLTAGE
 The unit's back cover should never be opened by anyone other than a qualified servicetperson. There are many high voltage parts inside the unit, and touching them is dangerous.

4. IC Protectors Replacement

ICPs (IC Protectors) are installed to protect the Optical (LSU) unit, Printer motor drive circuit, Solenoid drive circuit and Scanner motor drive circuit. ICPs protect various ICs and electronic circuits from an overcurrent condition.

The location of ICPs are shown below:

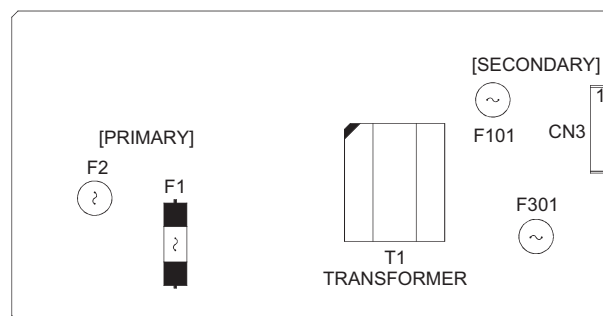


- 1) F300 (KAB5002 251) is installed in order to protect IC's from an overcurrent generated in the IC302 circuit. If F300 is open, replace it with a new one.
- 2) F500 (KAB2402 402) is installed in order to protect IC's from an overcurrent generated in the Printer motor drive circuit. If F500 is open, replace it with a new one.
- 3) F501 (KAB5002 321) is installed in order to protect IC's from an overcurrent generated in the Solenoid driver circuit. If F501 is open, replace it with a new one.
- 4) F600 (KAB3202 801) is installed in order to protect IC's from an overcurrent generated in the Scanner motor drive circuit. If F5 is open, replace it with a new one.

Replacement parts

KAB3202 801 (Sharp code: QFS-L1037YCZZ)
 KAB5002 251 (Sharp code: QFS-L2021XHZZ)
 KAB2402 402 (Sharp code: QFS-L2025XHZZ)
 KAB5002 321 (Sharp code: QPRT2001XHZZ)

5. Power Supply Unit Replacement






- 1) F1 (K7135AS007): AC250V/10A is installed in order to protect overcurrent by heater circuit breakdown.
- 2) F2 (K7144AR005): HTM250V/4A is installed in order to protect overcurrent by primary circuit breakdown.
- 3) F101 (K7144AR005): HTM250V/4A is installed in order to protect overcurrent by breakdown of +24V line.
- 4) F301 (K7144AR002): HTM250V/2A is installed in order to protect overcurrent by breakdown of Ach line.

Caution: Don't use fuse except for rating above.



6. Volume Adjustment

You can adjust the volume of the speaker, handset, and ringer using the up and down arrow keys.





1. Speaker volume

- 1) Press  .
- 2) Press  or  to select HIGH, MIDDLE, or LOW.
 - To turn off the speaker, press again.

2. Handset

- 1) When talking through the handset, press  or  to select HIGH, MIDDLE, or LOW.
 - **Note:** The volume reverts to MIDDLE each time you replace the handset.

3. Ringer

- 1) Press  or  to select HIGH, MIDDLE, LOW or OFF. (Make sure  has not been pressed, the handset is not lifted, and a document is not loaded in the feeder.)
 - The ringer will ring once at the selected level.
- 2) If you selected "OFF OK?" to turn off the ringer, press  .

[2] Diagnostics and service soft switch

1. Entering the diagnostic mode

Press **FUNCTION** → **9** → ***** → **8** → **#** → **7**, and the following display will appear alternately.

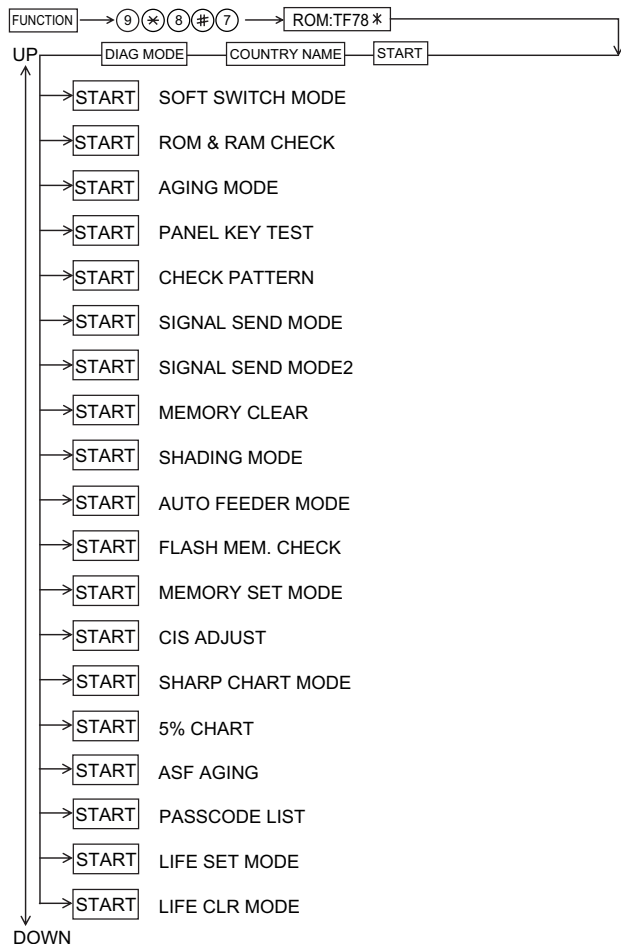
ROM:TF78 * *: ROM version

Then press the **START** key.

Select the desired item with the UP key and the DOWN key or select with the rapid key.

Enter the mode with the **START** key.

(Diag. specifications)



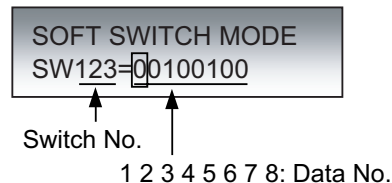
2. Diagnostic items description

2.1. SOFT SWITCH MODE

In this mode, the soft switches are set and the soft switch list is printed.

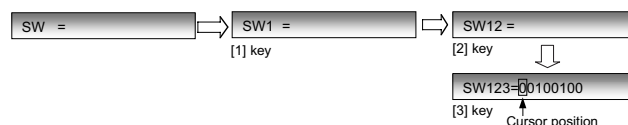
2.1.1 Operation

Soft switch mode screen

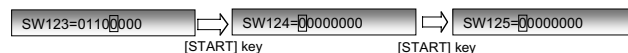


2.1.2 Switch number selection and data setting

- Enter three digits of a soft switch number to set the switch number. Of a switch number of unexacting soft switch is entered, key error buzzer sounds to reject the input.

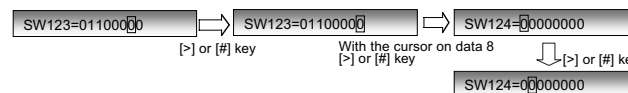


- Press **[START]** key moves the cursor to the data number 1 of the former soft switch. If the switch number is the final, pressing **[START]** key will exit the soft switch mode.

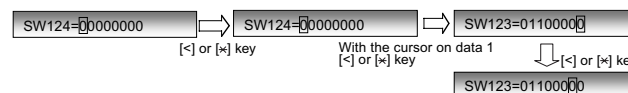


- Data number selection

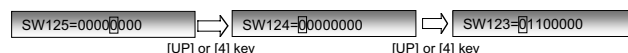
- Pressing **[>]** or **[#]** key moves the cursor to the right. If the cursor is on data number 8, pressing **[>]** or **[#]** key shifts the cursor to data number 1 of the next switch number. If the switch number is the final, pressing **[>]** or **[#]** key will exit the soft switch mode.



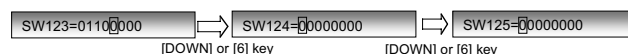
- Pressing **[<]** or **[*]** key moves the cursor to the left. If the cursor is on data number 1, pressing **[<]** or **[*]** key shifts the cursor to data number 8 of the former switch number. If the switch number is 001, pressing **[<]** or **[*]** key do not move the cursor.



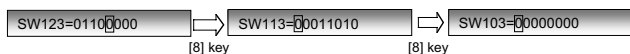
- Pressing **[UP]** or **[4]** key moves the cursor to the data number 1 of the next soft switch. If the switch number is 001, pressing **[UP]** or **[4]** key shifts the cursor to data number 1.



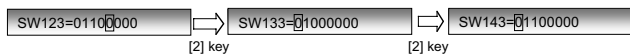
- Pressing **[DOWN]** or **[6]** key moves the cursor to the data number 1 of the former soft switch. If the switch number is the final, pressing **[down]** or **[6]** key will exit the soft switch mode.



e) Pressing [8] key moves the cursor to the data number 1 of the 10th former soft switch.



f) Pressing [2] key moves the cursor to the data number 1 of the 10th next soft switch.



2.1.3 Data setting

Press the [1] key, and the data to the position of the cursor will be changed to 1.

Press the [0] key, and the data to the position of the cursor will be changed to 0.

2.1.4 Outputting method of soft switch list

In the soft switch mode, press [COPY/HELP] key, and the soft switch list will be printed.

2.1.5 Storage of data

In the following cases, the data if the soft switches set will be stored.

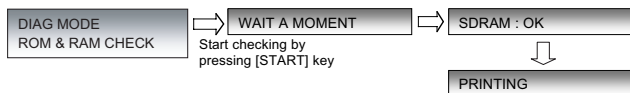
- It is shifted to set the next soft switch by pressing [START] key.
- If is shifted to set the former soft switch with the [<] or [UP] or [4] key.
- It is shifted to set the next soft switch with the [>] or [DOWN] or [6] key.
- If is shifted to set the 10th former soft switch with the [8] key.
- It is shifted to set the 10th next soft switch with the [2] key.

2.2. ROM & RAM CHECK

To check the sum value of Firmware or RAM.

No.	Device	Alarm Buzzer	Remarks
1	Main	ROM (PROGRAM FLASH)	1 time <Short sound>
2		SDRAM	3 times <Short sounds>

2.2.1 Display



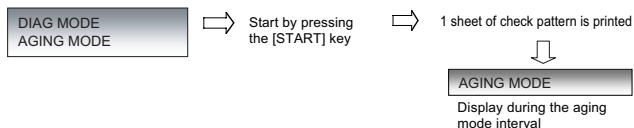
2.2.2 Result printing

After checking, the results print starts.

2.3. AGING MODE

A total of 10 sheets of check patterns are printed at 1-hour intervals.

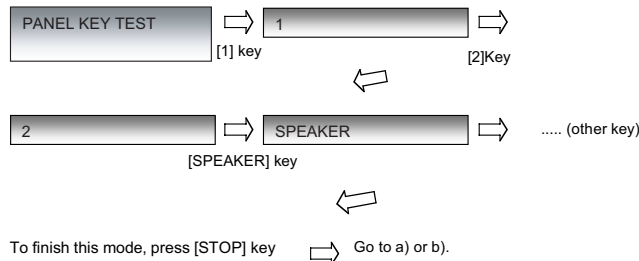
This mode is exited when executed to the end (after 9 hours) or by pressing the [STOP] key.



2.4. PANEL KEY TEST

This is used to check whether each key is normally operated or not. After the test, the test result will be printed.

Press any key except [STOP] key. At this time, the name of each key will be displayed every push of the key.



a) When all keys can be inputted, the following message will be displayed.

ALL KEY OK !!

Then the screen will be all displayed in black (refer to (2)) and the test result will be printed.

b) If any key skipped, the following message will be displayed.

KEY ERROR !!

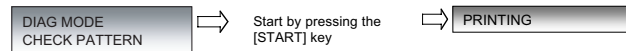
A key name that is not pressed yet is displayed so that this test can be continued.

At that time, pressing the [STOP] key will exit this mode. And the result will be printed.

After pressing the [STOP] key, the whole black screen appears and the LED lights.

2.5. CHECK PATTERN

1 sheet of check patterns is printed.

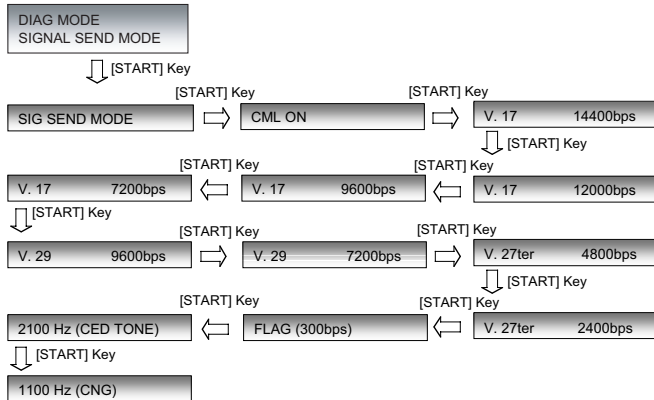


2.6. SIGNAL SEND MODE

The specified signals are transmitted in the following sequence to check the modem.

1. Press the [START] key, and no signals with the loop state starts.

[1] No signals (making the loop)	[7] 7200BPS (V. 29)
[2] 14400BPS (V. 17)	[8] 4800BPS (V. 27ter)
[3] 12000BPS (V. 17)	[9] 2400BPS (V. 27ter)
[4] 9600BPS (V. 17)	[10] 300BPS (FLAG)
[5] 7200BPS (V. 17)	[11] 2100Hz (CED)
[6] 9600BPS (V. 29)	[12] 1100Hz (CNG)



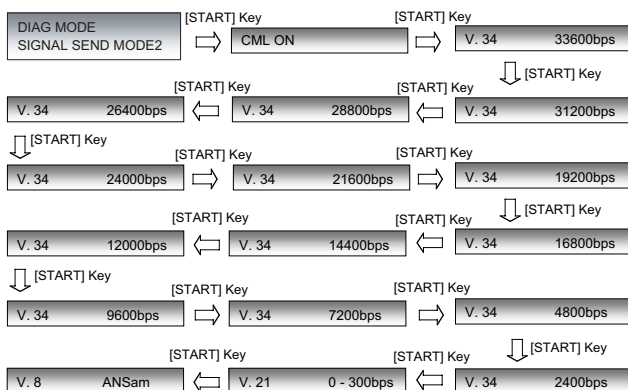
2. Pressing the [START] key during transmitting CNG signal, or pressing the [STOP] key will stop the output of signal and exit the mode.

2.7. SIGNAL SEND MODE2

A V.34 & V.8 related signal send mode. The check of the modem and other devices is performed by sending these specific signals.

1. When pressing the [START] key, it turns into the no-signal state (make loop). Then signals are sent in the following order by pressing the [START] key.

[1] No signals (making the loop)	[9] 16800bps (V. 34)
[2] 33600bps (V. 34bis)	[10] 14400bps (V. 34)
[3] 31200bps (V. 34bis)	[11] 12000bps (V. 34)
[4] 28800bps (V. 34)	[12] 9600bps (V. 34)
[5] 26400bps (V. 34)	[13] 7200bps (V. 34)
[6] 24000bps (V. 34)	[14] 4800bps (V. 34)
[7] 21600bps (V. 34)	[15] 2400bps (V. 34)
[8] 19200bps (V. 34)	[16] 0-300bps (V. 21)
	[17] ANSam

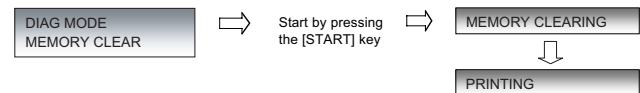


2. When pressing the [START] after sending the ANSam signal or the [STOP] key while executing the mode, the signal output is stopped and the indication before starting the next mode (MEMORY CLEAR) appears.

2.8. MEMORY CLEAR

Clear the back-up memory including the soft switches, registration data. After executing this mode, the memory clear report is printed.

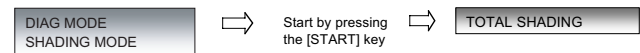
Note: The printer/scanner life information is not cleared.



2.9. SHADING MODE

Shading waveforms are stored.

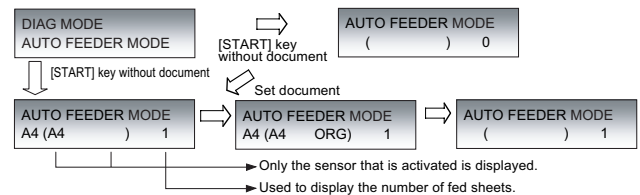
Set a shading sheet and press the [START] key to start shading.



2.10. AUTO FEEDER MODE

Inserting and discharging the document can check the auto feeder.

1. The information of document sensor (A4 sensor) and ORG sensor is displayed when the documents are inserted to the Auto Feeder. Press the [START] key, and feeding documents is started.



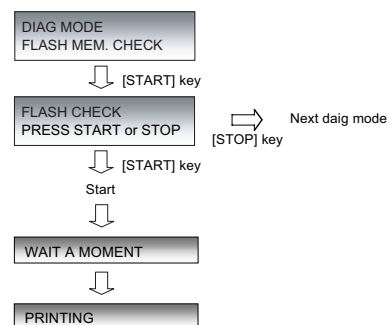
2. Press [STOP] key to exit the mode.

2.11. FLASH MEM. CHECK

Read/write of the flash memory is checked.

The result is printed after completion of check.

Be sure to clear the memory after execution.



2.12. MEMORY SET MODE

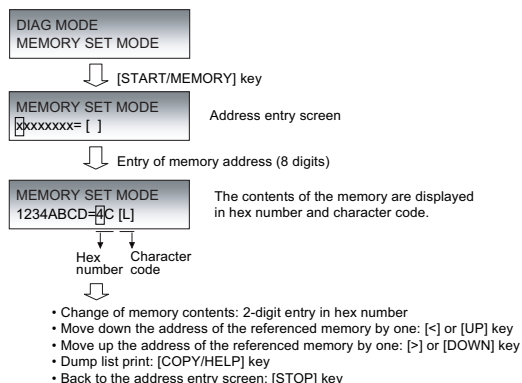
It is possible to read or write the memory contents.

When 8 digits of physical address are entered, the data of that address is displayed.

When 2 digits of data are entered after entering 8 digits of address and a key is pressed, the contents can be rewritten.

Rewriting is enabled only in the range of addresses 00000000 to 007FFFFF.

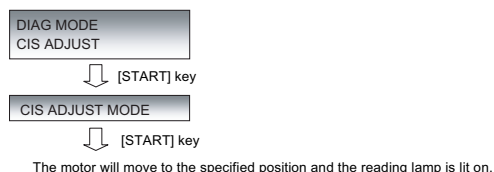
If the memory is rewritten, the machine may malfunction.



Press the [STOP] key on the address entry screen to exit the mode.

2.13. CIS ADJUST

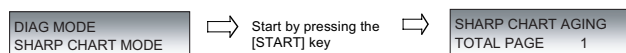
In this mode, the position of Scanner motor is moved from the home position up to the specified value. And document reading lamp is turned on.



Press the [STOP] key to exit the mode.

2.14. SHARP CHART MODE

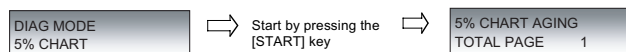
SHARP CHART is printed continuously.



Press the [STOP] key for interruption.

2.15. 5% CHART

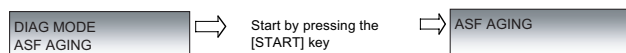
5% CHART is printed continuously.



Press the [STOP] key for interruption.

2.16. ASF AGING

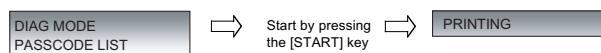
The recording paper is fed continuously.



Press the [STOP] key for interruption.

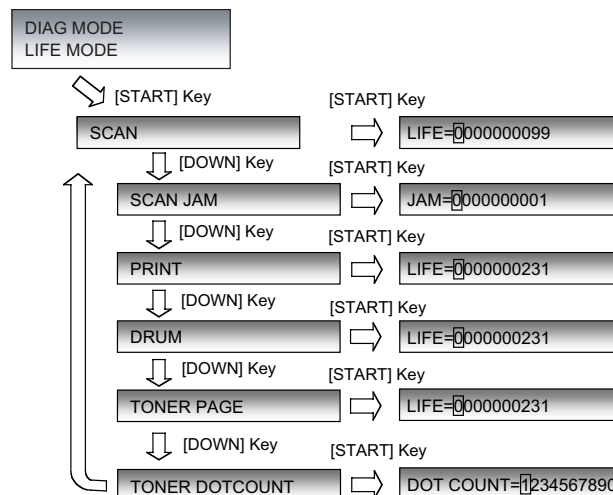
2.17. PASSCODE LIST

Used to print the passcode (SECURE FAX, etc.).



2.18. LIFE SET MODE

A mode for checking or setting the life value of each operation. Enter the count value (10-digit number) of the set life using the numeric key-pad.

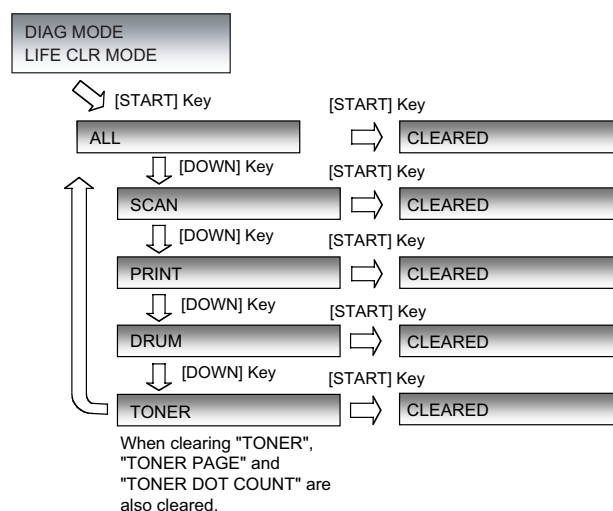


This counter shows the printer usage status (number of printed sheets after starting use, etc.). The counter cannot be reset by normal memory clear. Therefore, if the memory contents on the control PWB are destroyed when repairing it, this counter setting must be cleared in addition to normal memory clear.

Press the [STOP] key to exit the mode.

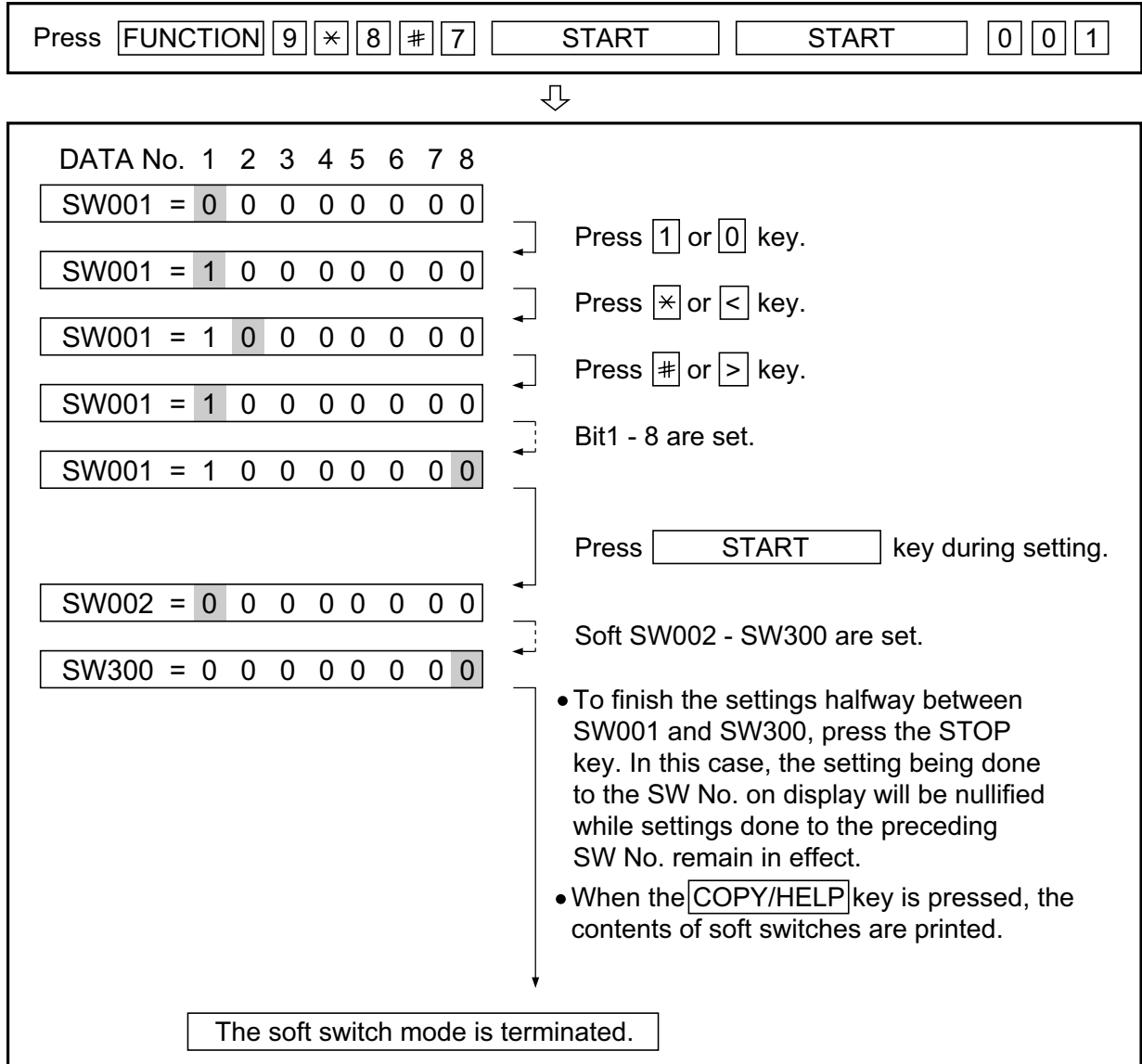
2.19. LIFE CLR MODE

A mode for clearing the life value.



3. How to make soft switch setting

To enter the soft switch mode, press the following key entries in sequence.



4. Soft switch description

4.1. Soft switch

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks
			1			0				
SW 1		Receive mode		AUTO	MANU.				0 0	RECEPTION key
	1	No.1	0	0						
	2	No.2	0	1						
	3	Reserved							1	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Sort copy function	Yes (Sort)			No			0	OPTION
8	Reserved							0		
	1	Forced 4800BPS reception	Yes			No			0	
SW 2		CED tone signal interval		75ms	500ms	750ms	1000ms		0 0	
	2	No.2	0	0	1	1				
	3	No.3	0	1	0	1				
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Footer print	Yes			No			0	
	8	Reserved							0	
SW 3	1	Reserved							0	
	2	CSI transmission	Not transmitted			Transmitted			0	
	3	Action when RTN is received	No communication error			Communication error			0	
	4	Reserved							1	
	5	Pulse format	N+1			N			0	
	6	DIS receive acknowledgement during G3 transmission	Twice			NSF: Once DIS: Twice			0	
	7	Non-modulation carrier for V29 transmission mode	Yes			No			0	
	8	Default file format for network scan	PDF			TIFF			0	e-mail setting
SW 4	1	Protocol monitor	Yes			No			0	
	2	Line monitor	Yes			No			0	
	3	Reserved							0	
	4	Sender's information transmit	No			Yes			0	
	5	Reserved							0	
	6	Reserved							0	
	7	H2 mode	No			Yes			0	
	8	ECM mode	No			Yes			0	
SW 5	1	ECM MMR mode	No			Yes			0	
	2	Signal transmission level	Binary input No. = 8 4 2 1 2 3 4 5 (Data No.) EX 1 1 0 1 eg. -13dBm						1	
	3								1	
	4								0	
	5								1	
	6	Reserved							0	
	7	Reserved							1	
	8	Key tone	Off			On			0	OPTION

SW NO.	DATA NO.	ITEM	Switch setting and function				Initial setting	Remarks	
			1		0				
SW 6	1 2 3 4	Recall interval (FAX)	Binary input No. = 8 4 2 1 1 2 3 4 (Data No.) EX 0 1 0 1 eg. 3 minutes				0 1 0 1	Setting: N = 1 to 9	
	5 6 7 8	Recall times (FAX)	Binary input No. = 8 4 2 1 5 6 7 8 (Data No.) EX 0 0 1 1 eg. 5 times				0 0 1 1	Setting: N = 1 to 9	
SW 7	1	Reserved					0		
	2	Reserved					0		
	3	Dial mode	Pulse		Tone		0		
	4	Reserved					1		
	5	Reserved					0		
	6	CNG detection	Yes		No		1		
	7	Number of CNG detection	3 pulses		2 pulses		0		
SW 8	1 2 3 4	Modem speed(Except V.34 mode)		No. 1	No.2	No. 3	No. 4	1 0 0 0	
				0	0	0	1		
				0	0	1	1		
				0	0	1	0		
				0	0	0	0		
	5	Reserved					0		
	6	Reserved					0		
	7	Reserved					0		
SW 9	1	Reserved					1		
	2	Reserved					1		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					1		
	6	Polling key setting	Yes		No		0	OPTION	
	7	Polling security	Yes		No		1	ENTRY mode	
	8	Date format	Month-Day-Year		Day-Month-Year		1		
SW 10	1	Reserved					0		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6 7 8	Communication results printout		No. 6	No. 7	No. 8	0 0 0 1	OPTION	
			Error Only	0	0	1			
			Error/Memory	0	0	0			
			Transmission	0	1	0			
			Not Printed	1	0	0			
Every Time			1	1	0				
SW 11	1	Reserved					0		
	2	Activate receive fax to e-mail	On		Off		0	Fax to e-mail/ Folder	
	3	Activate secure receive	On		Off		0	SECURITY	
	4	Reserved					0		
	5	Reserved					0		
	6	Call restriction					0	SECURITY	
	7	Reserved					0		
	8	Reserved					0		

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks
			1			0				
SW 12	1	Reserved							0	
	2	Reserved							0	
	3 4	EOL detection timer		13sec	25sec	5sec	5sec		0	
			No. 3	0	0	1	1		0	
			No. 4	0	1	0	0		0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
8	Reserved							0		
SW 13	1 2 3	DTMF ON time			No. 1	No. 2	No. 3		0 1 1	
			70ms		0	0	0			
			90ms		0	0	1			
			95ms		0	1	0			
			100ms		0	1	1			
			110ms		1	0	0			
			120ms		1	0	1			
			140ms		1	1	0			
			150ms		1	1	1			
	4 5 6	DTMF OFF time			No. 4	No. 5	No. 6		0 1 0	
			100ms		0	0	0			
			110ms		0	0	1			
			120ms		0	1	0			
			135ms		0	1	1			
			140ms		1	0	0			
			150ms		1	0	1			
			180ms		1	1	0			
	200ms		1	1	1					
7	Make/Break ratio in DP	40/60			33/67			1		
8	Reserved							0		
SW 14	1 2 3	Inter digit pause time			No. 1	No. 2	No. 3		0 0 0	
			800ms		0	0	0			
			840ms		0	0	1			
			880ms		0	1	0			
			900ms		0	1	1			
			1000ms		1	0	0			
			Not used		1	0	1			
			Not used		1	1	0			
	Not used		1	1	1					
	4	Change to PB from DP by " × " Key	Yes			No			1	
	5	Reserved							0	
6	Reserved							0		
7	Reserved							0		
8	Reserved							0		
SW 15	1	Reserved							0	
	2	Reserved							1	
	3	Reserved							1	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW 16	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	

SW NO.	DATA NO.	ITEM	Switch setting and function				Initial setting	Remarks	
			1		0				
SW 17	1	Reserved					1		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					0		
	7	Automatic reduce of receive	100%	Auto			0	OPTION	
	8	Reserved					0		
SW 18	1	Reserved					1		
	2	Reserved					0		
	3	Reserved					1		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		
SW 19	1	Reserved					0		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					1		
	7	Reserved					0		
	8	Send hold	Yes	No			0	SECURITY	
SW 20	1	DTMF output level (High)	Binary input No. = 16 8 4 2 1 1 2 3 4 5 (Data No.) EX 0 1 1 0 1 eg. Signal transmission level is set to -10dBm				0		
	2						1		
	3						1		
	4						0		
	5						1		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		
SW 21	1	DTMF output level (Low)	Binary input No. = 16 8 4 2 1 1 2 3 4 5 (Data No.) EX 1 0 0 0 1 eg. Signal transmission level is set to -10dBm				1		
	2						0		
	3						0		
	4						0		
	5						1		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		
SW 22	1	Dial tone detection frequency		No. 1	No. 2	No. 3		0	
			280 - 520Hz	0	0	0			
			380 - 500Hz	0	0	1			
			300 - 600Hz	1	0	0			
			Reserved	0	1	0			
			Reserved	0	1	1			
			Reserved	1	0	1			
			Reserved	1	1	0			
	2	Busy tone detection frequency		No. 4	No. 5			0	
			520 - 640Hz	0	0				
			300 - 600Hz	0	1				
			380 - 500Hz	1	0				
	3		520 - 640Hz	1	1			0	
								0	
								0	
								0	
4	Reserved						0		
5	Reserved						0		
6	Reserved						0		
7	Reserved						0		
8	Reserved						0		

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting	Remarks
			1		0				
SW 23	1	Number of rings for auto-receive (0:No ring receive)	Binary input No. = 8 4 2 1 1 2 3 4 (Data No.) EX 0 1 0 0 eg. Number of rings for auto-receive is set to 1.					0	
	2							1	
	3							0	
	4							0	
	5	Distinctive ring		No. 5	No. 6	No. 7	No. 8	0	
	6		OFF	0	0	0	0		
	7		STD	0	0	0	1		
	8		RING1	1	0	0	0		
			RING2	0	1	0	0		
			RING3	1	1	0	0		
			RING4	0	0	1	0		
		RING5	1	0	1	0	0		
SW 24	1	Reserved					0		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					1		
	7	Reserved					1		
	8	Reserved					0		
SW 25	1	Reserved					0		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		
SW 26	1	Reserved					0		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		
SW 27	1	Reserved					0		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		
SW 28	1	Reserved					0		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 29	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 30	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 31	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 32	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 33	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 34	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 35	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks	
			1			0					
SW 36	1	Reserved							0		
	2	Reserved							0		
	3	Reserved							0		
	4	Reserved							0		
	5	Reserved							0		
	6	Reserved							0		
	7	Reserved							0		
	8	Reserved							0		
SW 37	1 2	Delay timer before line connect in auto dial		0sec	1.5sec	3.0sec			0 0		
			No. 1	0	0	1					
			No. 2	0	1	0					
	3 4	Delay timer after line connect in auto dial		1.7sec	3.0sec	3.6sec	4.0sec		0 0		
			No. 3	0	0	1	1				
			No. 4	0	1	0	1				
	5 6	Calling time		45sec	90sec	55sec			0 0		
			No. 5	0	0	1					
			No. 6	0	1	0					
	7 8	CNG timing		3.5sec	1.5sec	3.0sec			0 0		
			No. 7	0	0	1					
			No. 8	0	1	0					
	SW 38	1	Dial tone detection (before auto dial)	On			Off			0	OPTION
		2	Busy tone detection (after auto dial)	On			Off			1	
		3	Recall control (for FCC Part68)	On			Off			1	
		4	Reserved							0	
5		Reserved							0		
6		Reserved							0		
7		Reserved							0		
8		Reserved							0		
SW 39	1	Reserved							0		
	2	Reserved							0		
	3	Reserved							0		
	4	Reserved							0		
	5	Reserved							0		
	6	Reserved							0		
	7	Reserved							0		
	8	Reserved							0		
SW 40	1	Reserved							0		
	2	Reserved							0		
	3	Reserved							0		
	4	Reserved							0		
	5	Reserved							1		
	6	Reserved							1		
	7 8	Paper Size		LETTER	A4	LEGAL	LETTER		0 0	OPTION LETTER/LEGAL only	
			No. 7	0	0	1	1				
SW 41	1 2	Reserved							0		
			4sec			2sec			0		
	3 4	Line density selection		STANDARD	FINE	S-FINE	STANDARD		0 0	OPTION FINE/STANDARD only	
			No. 3	0	0	1	1				
			No. 4	0	1	0	1				
	5	Activity report print	Yes (When memory full)			No (First data is cleared when memory full)			0	OPTION	
	6	Daylight saving	No			Yes			1	OPTION	
	7	Print setting of received fax for Fax to e-mail	Print at error			Always print			0	Fax to e-mail/ Folder	
	8	Reserved							0		

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks
			1			0				
SW 42	1	Reserved							0	
	2	Reserved							0	
	3	Ringer volume		OFF	LOW	MIDDLE	HIGH		0	
			No. 3	0	0	1	1			
	4		No. 4	0	1	0	1		1	
	5	Speaker volume		LOW	LOW	MIDDLE	HIGH		0	
			No. 5	0	0	1	1			
6		No. 6	0	1	0	1		1		
7	Reserved							0		
8	Reserved							0		
SW 43	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							1	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW 44	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	CI signal min. off time			No. 4	No. 5	No. 6		1	
			200ms		0	0	0			
			300ms		0	0	1			
			350ms		0	1	0			
			400ms		0	1	1			
			500ms		1	0	0			
			700ms		1	0	1			
			1200ms		1	1	0			
	5		Not used		1	1	1		0	
6								1		
7	Reserved							0		
8	Reserved							1		
SW 45	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							1	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW 46	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							1	
	8	Reserved							0	
SW 47	1	Reserved							0	
	2	Reserved							1	
	3	Reserved							0	
	4	Reserved							1	
	5	Reserved							1	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 48	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 49	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 50	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			0	
SW 51	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			0	
SW 52	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 53	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 54	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function							Initial setting	Remarks
			1			0					
SW 55	1	Reserved								0	
	2	Reserved								0	
	3	Digital cable equalizer for reception	Yes			No				0	
	4	Reserved								0	
	5	Reserved								1	
	6	Reserved								0	
	7	Reserved								0	
	8	Reserved								0	
SW 56	1	Reserved								0	
	2	Reserved								1	
	3	Reserved								0	
	4	Reserved								0	
	5	CNG detection time after ringing		20sec	10sec	30sec	No limit		0		
	6		No. 5	0	0	1	1				
		No. 6	0	1	0	1		0			
	7	Reserved								0	
8	Reserved								0		
SW 57	1	Reserved								0	
	2	Reserved								0	
	3	Reserved								0	
	4	Pop server access interval		60min.	30min.	5min.	1min.		1		
	5		No. 4	0	0	1	1				
		No. 5	0	1	0	1		0			
	6	Reserved								0	
	7	Reserved								0	
8	Reserved								0		
SW 58	1	Reserved								0	
	2	Reserved								1	
	3	Reserved								0	
	4	Reserved								0	
	5	Reserved								0	
	6	Reserved								0	
	7	Reserved								0	
	8	CED detection time	500ms			1000ms				0	
SW 59	1	MH fixed	Yes			No				0	
	2	Reserved								0	
	3	Reserved								0	
	4	Reserved								0	
	5	Reserved								0	
	6	Reserved								0	
	7	Reserved								0	
	8	Reserved								0	
SW 60	1	Reserved								0	
	2	Reserved								0	
	3	Reserved								0	
	4	Reserved								0	
	5	Reserved								0	
	6	Reserved								0	
	7	Reserved								0	
	8	Reserved								0	
SW 61	1	Reserved								0	
	2	Reserved								0	
	3	Reserved								0	
	4	Reserved								0	
	5	Reserved								0	
	6	Reserved								0	
	7	Reserved								0	
	8	Reserved								0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 62	1	Digital cable equalizer for transmission	Effective	Not effective	0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 63	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 64	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 65	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 66	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 67	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 68	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 69	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 70	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 71	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 72	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 73	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 74	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 75	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 76	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 77	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Error criterion	10~20%	5~10%	0	
	5	Toner empty print	Print	Not print	0	
	6	Reserved			0	
	7	Drum life over	Printer error	Printer warning	0	
	8	Reserved			0	
SW 78	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 79	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 80	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 81	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 82	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 83	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 84	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 85	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 86	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 87	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 88	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 89	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 90	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 91	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 92	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 93	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			1	
SW 94	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 95	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 96	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 97	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 98	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 99	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 100	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 101	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 102	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 103	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 104	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 105	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 106	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			0	
SW 107	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 108	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 109	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 110	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 111	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 112	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 113	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 114	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 115	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 116	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			1	
SW 117	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 118	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 119	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 120	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			1	
SW 121	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 122	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 123	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 124	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 125	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 126	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 127	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 128	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 129	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 130	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 131	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 132	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 133	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 134	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 135	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 136	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 137	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 138	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting	Remarks
			1		0				
SW 139	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW 140	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW 141	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW 142	1	Reserved						1	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						1	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW 143	1	Reserved						0	
	2	Reserved						1	
	3	Reserved						1	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW 144	1 2 3	Connect configuration for LAN controller		No. 1	No. 2	No. 3		0 0 0	
			Default (Auto)	0	0	0			
			Full duplex 100M	0	0	1			
			Full duplex 10M	0	1	0			
			Auto	0	1	1			
			Half duplex 100M	1	0	0			
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks			
			1			0							
SW 145	1 2 3 4	Detect time of LAN link on	Binary input No. = 8 4 2 1 1 2 3 4 (Data No.) EX 0 1 0 0 = 4seconds Note: "0 0 0 0" = 1 second						0 0 0 0	1 - 15 seconds			
		5 6 7 8	Detect time of LAN link off	Binary input No. = 8 4 2 1 5 6 7 8 (Data No.) EX 0 1 0 0 = 4seconds Note: "0 0 0 0" = 1 second						0 0 0 0	1 - 15 seconds		
			SW 146	1	Reserved							0	
				2 3	Default resolution for network scan		Stand- ard	Fine	S-Fine			0 1	
	No. 2					0	0	1					
	No. 3	0				1	0						
	4	Reserved								0			
	5	Reserved								0			
6	Reserved							0					
7	Reserved							0					
SW 147	8	Reserved							0				
	SW 148	1 2 3 4	DST start time-Month (1-12)	Binary input No. = 8 4 2 1 1 2 3 4 (Data No.) EX 0 0 1 1 Set value: 1~12						0 0 1 1	OPTION		
			5 6 7 8	DST start time-Week		1st week	2st week	3st week	4st week	Last week	0 0 1 0	OPTION	
					No. 5	0	0	0	0	0			
					No. 6	0	0	0	1	1			
		No. 7			0	1	1	0	0				
			No. 8	1	0	1	0	1					

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks
			1			0				
SW 149	1 2 3	DST start time-Day of week		No. 1	No. 2	No. 3		0 0 0	OPTION	
			Sunday	0	0	0				
			Monday	0	0	1				
			Tuesday	0	1	0				
			Wednesday	0	1	1				
			Thursday	1	0	0				
			Friday	1	0	1				
			Saturday	1	1	0				
	4 5 6 7 8	DST start time-Hour	Binary input No. = 16 8 4 2 1 4 5 6 7 8 (Data No.) EX 0 0 0 1 0 Set value: 0~23						0 0 0 1 0	
SW 150	1 2 3 4	DST end time-Month (1-12)	Binary input No. = 8 4 2 1 1 2 3 4 (Data No.) EX 1 0 1 1 Set value: 1~12						1 0 1 1	OPTION
	5 6 7 8	DST end time-Week		1st week	2st week	3st week	4st week	Last week	0 0 0 1	OPTION
			No. 5	0	0	0	0	0		
			No. 6	0	0	0	1	1		
			No. 7	0	1	1	0	0		
			No. 8	1	0	1	0	1		
	SW 151	1 2 3	DST end time-Day of week		No. 1	No. 2	No. 3		0 0 0	OPTION
				Sunday	0	0	0			
				Monday	0	0	1			
Tuesday				0	1	0				
Wednesday				0	1	1				
Thursday				1	0	0				
Friday				1	0	1				
Saturday				1	1	0				
4 5 6 7 8		DST end time-Hour	Binary input No. = 16 8 4 2 1 4 5 6 7 8 (Data No.) EX 0 0 0 0 1 Set value: 0~23						0 0 0 0 1	
SW 152	1	FTP mode set	Enable			Disable			0	
	2	User control	Yes			No			0	SECURITY
	3	Authentication method	Login name & password			User number			0	SECURITY
	4	Authorized transmission	Yes			No			0	SECURITY
	5 6	To be authenticated		Fax and e-mail	Fax only	e-mail only	Fax and e-mail		0 0	SECURITY
			No. 5	0	0	1	1			
			No. 6	0	1	0	1			
	7 8	Notice to the sender		After auth.	After auth. and after sending fax	No notice	After auth.		0 0	SECURITY
			No. 7	0	0	1	1			
			No. 8	0	1	0	1			

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks
			1			0				
SW 153		Automatic elimination		After 3 hours	After 24 hours	Not deleted	After 3 hours		0 0	SECURITY
	1	No. 1	0	0	1	1				
	2	No. 2	0	1	0	1				
	3	Search method by right and left key	Fax data			All data			0	OPTION
	4	Warning when login fails	Enable			Disable			0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
SW 154	8	Reserved							0	
	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
SW 155	8	Reserved							0	
	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
SW 156	8	Reserved							0	
	1	Reserved							0	
	2	Reserved							1	
	3	Reserved							1	
	4	Reserved							0	
	5	Reserved							1	
	6	Reserved							0	
	7	Reserved							0	
SW 157	8	Reserved							0	
	1	V.34 mode function	On			Off			1	
	2	V.34 mode function in case of manual communication	On			Off			1	
	3	V.34 control channel communication speed	2400bps			1200bps			0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
SW 158	8	Reserved							0	
		V.34 mode transmission speed	Sending speed = 2400(bps) x n Example: 2400(bps) x 12 = 28800(bps) 2400(bps) is set for N=0. 33600(bps) is set for N=15.						1 1 1 0	
		V.34 mode receiving speed	Receiving speed = 2400(bps) x n Example: 2400(bps) x 12 = 28800(bps) 2400(bps) is set for N=0. 33600(bps) is set for N=15.						1 1 1 0	
	5									
	6									
	7									
	8									

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 159	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 160	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 161	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			0	
SW 162	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 163	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 164	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 165	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 166	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 167	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 168	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 169	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 170	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 171	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 172	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 173	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 174	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 175	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 176	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 177	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 178	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 179	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 180	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 181	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			0	
SW 182	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 183	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 184	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 185	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 186	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 187	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			1	
SW 188	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 189	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 190	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			0	
SW 191	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 192	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 193	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 194	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 195	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			1	
SW 196	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			1	
SW 197	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 198	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			1	
SW 199	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 200	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 201 SW 210	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 211 SW 221	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 222	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			1	
SW 223	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 224	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 225	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			1	
SW 226	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			1	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 227	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			0	
SW 228 SW 229	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 230	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 231	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			1	
SW 232	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 233 SW 238	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 239 SW 240	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 241	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 242	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Pre-heat timing	After closing data file	Receiving print request	0	
SW 243	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 244	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 245	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 246	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			1	
SW 247 SW 249	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 250	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 251 SW 255	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			1	
SW 256 SW 257	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			1	
SW 258	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 259	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 260	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 261	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 262	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 263	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 264	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 265	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 266	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 267	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 268	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 269	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 270	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 271	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 272	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW 273	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 274	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 275 SW 290	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			1	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 291	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			1	
SW 292	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 293	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 294	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 295	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW 296	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW 297	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW 298	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW 299 SW 290	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

4.2. Soft switch function description

SW1 No. 1, No. 2 Receive mode

Used to select the reception mode (AUTO or MANUAL) for receiving faxes.

SW1 No. 3 ~ No. 6 Reserved

SW1 No. 7 Sort copy function

Used for sort copy.

SW1 No. 8 Reserved

SW2 No. 1 Forced 4800bps reception

When line conditions warrant that receptions take place at 4800 BPS repeatedly.

It may improve the success of receptions by setting at 4800BPS. This improves the receiving document quality and reduces handshake time due to fallback during training.

SW2 No. 2, No. 3 CED tone signal interval

For international communication, the 2100Hz CED tone may act as an echo suppressor switch, causing a communication problem. Though this soft switch is normally set to "0", it should be set to "1" so as to change the time between CED tone and DIS signal from 75ms to 500ms to eliminate the communication problem caused by echo.

SW2 No. 4 ~ No. 6 Reserved

SW2 No. 7 Footer print

When set to "1", the date of reception, the sender machine No, and the page No. are automatically recorded at the end of reception.

SW2 No. 8 Reserved

SW3 No. 1 Reserved

SW3 No. 2 CSI transmission

CSI signal contains the sender's phone number registered in the machine. If this switch is set to "1", no sender's name will be printed at the receiving side.

SW3 No. 3 Action when RTN is received

The operation is set when the RTN signal is received in the G3 transmission mode.

SW3 No. 4 Reserved

SW3 No. 5 Pulse format

Used to set the pulse number when actually dialing for the dialed number (N).

SW3 No. 6 DIS receive acknowledgement during G3 transmission

Used to make a choice of whether reception of NSF (DIS) is acknowledged after receiving two NSFs (DISs) or receiving one NSF (two DISs). It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW3 No. 7 Non-modulation carrier for V29 transmission mode

Though transmission of a non-modulated carrier is not required for transmission by the V29 modem according to the CCITT recommendation, it may be permitted to send a non-modulated carrier before the image signal to avoid an echo suppression problem. It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW3 No. 8 Default file format for network scan

SW setting the default of the compression format and the file type required for generating the image data from network scanned data.

SW4 No. 1 Protocol monitor

Normally set to "0". If set to "1", communication can be checked, in case of troubles, without using a G3 tester or other tools. When communication FSK data transmission or reception is made, the data is taken into buffer. When communication is finished, the data analyzed and printed out. When data is received with the line monitor (SW-4 No. 8) set to "1" the reception level is also printed out.

SW4 No. 2 Line monitor

Normally set to "0". If set to "1", the transmission speed and the reception level are displayed on the LCD. Used for line tests.

SW4 No. 3 Reserved

SW4 No. 4 Sender's information transmit

When it is set at 0, sender's name, sending page number and so on are automatically printed in the recording paper on the receiving side during transmission. Thus, the sender can be known on the receiving side.

SW4 No. 5, No. 6 Reserved

SW4 No. 7 H2 mode

Used to determine reception of H2 mode (15 sec transmission mode). When set to OFF, H2 mode reception is inhibited even though the transmitting machine has H2 mode function.

SW4 No. 8 ECM mode

Used to determine ECM mode function.

SW5 No. 1 ECM MMR mode

MMR (Modified MR) selects presence of the compression function.

SW5 No. 2 ~ No. 5 Signal transmission level

Used to control the signal transmission level in the range of -0dB to -31dB.

SW5 No. 6, No. 7 Reserved

SW-5 No. 8 Key tone

Used to select whether or not to sound the key tone.

SW6 No. 1 ~ No. 4 Recall interval (FAX)

Choice is made for a recall interval for speed and rapid dial numbers. Use a binary number to program this. If set to 0 accidentally, 1 will be assumed.

SW6 No. 5 ~ No. 8 Recall times (FAX)

Choice is made as to how many recall times should be made. Use a binary number to program this.

SW7 No. 1, No. 2 Reserved

SW7 No. 3 Dial mode

Switch the type according to the telephone circuit connected to the facsimile.

SW7 No. 4, No. 5 Reserved

SW7 No. 6 CNG detection

When setting to "1", the CNG signal detection function.

SW7 No. 7 Number of CNG detection

Used for detection of CNG in 2 or 3 pulses.

SW7 No. 8 Time format

When this switch is set to "0", time is displayed in 12-hour system.
When set to "1", 24-hour system.

SW8 No. 1 ~ No. 4 Modem Speed (Except V.34 mode)

Used to determine the initial modem speed. The default is 14400BPS(V.17). It may be necessary to program it to a slower speed when frequent line fallback is encountered, in order to save the time required for the fallback procedure.

SW8 No. 5 ~ No. 8 Reserved**SW9 No. 1 ~ No. 5 Reserved****SW-9 No. 6 Polling key setting**

Used to specify whether to enable or disable the polling key.

SW-9 No. 7 Polling security

Used to specify whether to allow the polling request from the other party's machine without conditions or to allow only the request from the authorized other party's machine.

SW9 No. 8 Date format

Used to select date display/print formats.

0: DAY-Month-Year

1: Month-Day-Year

SW10 No. 1 ~ No. 5 Reserved**SW10 No. 6 ~ No. 8 Communication results printout**

It is possible to obtain communication results after each transaction. Normally, the switch is set (No. 6: 0, No. 7: 0, No. 8: 1) so that the communication result is produced only a communication error is encountered. If No. 6 was set to 1, No. 7 was set to 1 and No. 8 was set to 0, the communication result will be produced every time a communication is done, even if the communication was successful. If No. 6 was set to 0, No. 7 to 1 and No. 8 to 0, the communication result will be produced every transmission. Setting No. 6 to 1 No. 7 to 0 and No. 8 to 0 will disable this function. No transaction report will be printed. If No. 6 was set to 0, No. 7 to 0 and No. 8 to 0, the communication result is produced only after a memory transmission or when a communication error is encountered.

SW11 No. 1 Reserved**SW11 No. 2 Activate receive fax to e-mail**

The receive fax to e-mail function ON/OFF is set.

SW11 No. 3 Activate secure receive

The Secure receive function ON/OFF is set.

SW11 No. 4, No. 5 Reserved**SW11 No. 6 Call Restriction**

Used to set the call restriction function to ON or OFF.

SW11 No. 7, No.8 Reserved**SW12 No. 1, No. 2 Reserved****SW12 No. 3, No. 4 EOL (End of Line) detection timer**

Used to make a choice of whether to use the 25-second or 13-second timer for detection of End of line This is effective to override communication failures with some facsimile models that have longer End of line detection.

SW12 No. 5 ~ No. 8 Reserved**SW13 No. 1 ~ No. 3 DTMF ON time**

Used to set the ON time of the DTMF signal when setting the tone dial.

SW13 No. 4 ~ No. 6 DTMF OFF time

Used to set the OFF time of the DTMF signal when setting the tone dial.

SW13 No. 7 Make/Break ratio in DP

Used to set the pulse make/break ratio when setting the pulse dial.

SW13 No. 8 Reserved**SW14 No. 1 ~ No. 3 Inter digit pause time**

Used to set the pause time between the dial data when setting the pulse dial.

SW14 No. 4 Change to PB from DP by " * "key

Used to set the function for switching to the tone dial by entering " * " to ON or OFF when setting the pulse dial.

SW14 No. 5 ~ No. 8 Reserved**SW15 No. 1 ~ No. 8 Reserved****SW16 No. 1 ~ No. 8 Reserved****SW17 No. 1 ~ No. 6 Reserved****SW17 No. 7 Automatic reduce of receive**

If set to 1, it is reduced automatically when receiving.

SW18 No. 1 ~ No. 8 Reserved**SW19 No. 1 ~ No. 7 Reserved****SW19 No. 8 Send hold**

Set the send hold function to ON or OFF.

SW20 No. 1 ~ No. 5 DTMF output level (High)

To set the level to output high group DTMF signals. -15 to 0 dBm (0.5dBm unit)

SW20 No. 6 ~ No. 8 Reserved**SW21 No. 1 ~ No. 5 DTMF output level (Low)**

To set the level to output low group DTMF signals. -15 to 0 dBm (0.5dBm unit)

SW21 No. 6 ~ No. 8 Reserved**SW22 No. 1 ~ No. 3 Dial tone detection frequency**

To select frequency range of signals to be detected as Dial Tone.

SW22 No. 4, No. 5 Busy tone detection frequency

To select frequency range of signals to be detected as Busy Tone.

SW22 No. 6 ~ No. 8 Reserved**SW23 No.1 ~ No. 4 Number of rings for auto-receive (0: No ring receive)**

When the machine is set in the auto receive mode, the number of rings before answering can be selected. It may be set from zero to nine rings using a binary number. If the soft switch was set to 1, a direct connection is made to the facsimile. If it was above 9, receive rings are set to 9.

SW23 No.5 ~ No. 8 Distinctive ring

When the ringing setting is turned off, all of the CI signal are received. When any of the standard, and ring patterns 1 through 5 is selected for the ringing setting, only the selected CI signal is received.

CI signal patterns

The CI signal patterns consists of the standard pattern, and ring patterns 1 through 7. The standard pattern is the conventional one.

SW24 ~ SW36 No. 1 ~ No. 8 Reserved**SW37 No. 1, No. 2 Delay timer before line connect in auto dial**

Set a time period between start of dial operation and line connection in the auto dial mode.

SW37 No. 3, No. 4 Delay timer after line connect in auto dial

Set a time period between dial-up line connection and dial data transmission in the auto dial mode.

SW37 No. 5, No. 6 Calling time

Set the call time for dialing in the auto dial mode.

SW37 No. 7, No. 8 CNG timing

Set a time period between dialing in the auto dial mode and CNG signal transmission.

SW38 No. 1 Dial tone detection (before auto dial)

When set to "1", a number is dialed after detecting the dial tone.

SW38 No. 2 Busy tone detection (after auto dial)

When set to "1", the busy tone is detected after dialing a number.

SW38 No. 3 Recall control (for FCC part68)

Recalling fixed only one time when dialing was unsuccessful without detecting busy tone signal.

SW38 No. 4 ~ No. 8 Reserved**SW39 No. 1 ~ No. 8 Reserved****SW40 No. 1 ~ No. 6 Reserved****SW40 No. 7, No. 8 Paper size**

The paper size is set.

SW41 No. 1 Reserved**SW41 No. 2 Dial pause**

Pauses can be inserted between telephone numbers of direct dial connection. Selection of 4 sec or 2 sec pause is available.

SW41 No. 3, No. 4 Line density selection

Used to set the transmission mode which is automatically selected when the Resolution key is not pressed. In the copy mode, however, the fine mode is automatically selected unless the Resolution key is manually set to another mode.

SW41 No. 5 Activity report print

This soft switch is used to select: whether or not to print out the activity report when the memory is full. An activity report can be printed when the following key entry command is mode.

"FUNCTION ", "↓", "↓", "↓", "→"

After producing the activity report, all the data in the memory will be cleared. When the switch function is set to "0" (no), the data in the memory will be deleted from the oldest as it reaches the maximum memory capacity.

SW41 No. 6 Daylight saving

The daylight saving function ON/OFF is set.

SW41 No. 7 Print setting of received fax for Receive Fax to e-mail

This soft switch is used to select before.

0: Received FAX is always printed when Receive Fax to e-mail function worked.

1: Received FAX is printed only transfer error when Receive Fax to e-mail function worked.

SW41 No. 8 Reserved**SW42 No. 1, No. 2 Reserved****SW42 No. 3, No. 4 Ringer volume**

The calling sound volume of CI signal receiving is set.

SW42 No. 5, No. 6 Speaker volume

The line monitor volume is set.

SW42 No. 7, No. 8 Reserved**SW43 No. 1 ~ No. 8 Reserved****SW44 No. 1 ~ No. 3 Reserved****SW44 No. 4 ~ No. 6 CI signal min. OFF time**

Used to set the min. OFF time criterion of the CI signal.

SW44 No. 7, No. 8 Reserved**SW45 No. 1 ~ No. 8 Reserved****SW46 ~ SW54 No. 1 ~ No. 8 Reserved****SW55 No. 1, No. 2 Reserved****SW55 No. 3 Digital cable equalizer for reception**

Digital cable equalizer for reception

0: OFF

1: ON

SW55 No. 4 ~ No. 8 Reserved**SW56 No. 1 ~ No. 4 Reserved****SW56 No. 5, No. 6 CNG detection time after ringing**

CNG detection time after completion of ringing.

SW56 No. 7, No. 8 Reserved**SW57 No. 1 ~ No. 3 Reserved****SW57 No. 4, No. 5 Pop server access interval**

Set the access interval to the Pop server.

SW58 No. 1 ~ No. 7 Reserved**SW58 No. 8 CED detection time**

It is effective to change the CED auto detection time setting if detection error often occurs.

SW59 No. 1 MH fixed

1: Both transmission and reception are forcibly fixed to MH.

0: Adjusted to the performance of the other party's machine.

SW59 No. 2 ~ No. 8 Reserved**SW60 No.1 ~ No. 8 Reserved****SW61 No. 1 ~ No. 8 Reserved****SW62 No. 1 Digital cable equalizer for transmission**

Digital cable equalizer for transmission

0: OFF

1: ON

SW62 No. 2 ~ No. 8 Reserved**SW63 ~ SW76 No. 1 ~ No. 8 Reserved****SW77 No. 1 ~ No. 3 Reserved****SW77 No. 4 Error criterion**

Used to select error criterion for sending back RTN when receiving image data.

SW77 No. 5 Toner empty print

Used to specify whether or not to cancel printing when "Toner Empty" is displayed.

SW77 No. 6 Reserved**SW77 No. 7 Drum life over**

Used to set whether or not to cancel printing when "Drum life over" is displayed.

SW77 No. 8 Reserved**SW78 ~ SW143 No. 1 ~ No. 8 Reserved****SW144 No. 1 ~ No. 3 Connect configuration for LAN controller**

Used to set the communication speed when connecting to LAN.

SW144 No. 4 ~ No. 8 Reserved**SW145 No. 1 ~ No. 4 Detect time of LAN link ON**

Used to change the link ON detection time setting when inserting the LAN cable.

SW145 No. 5 ~ No. 8 Detect time of LAN link OFF

Used to change the link OFF detection time setting when inserting the LAN cable.

SW146 No. 1 Reserved**SW146 No. 2, No. 3 Default resolution for network scan**

Used to set the default resolution for network scan.

SW146 No. 4 ~ No. 8 Reserved**SW147 No. 1 ~ No. 8 Reserved****SW148 No. 1 ~ No. 4 DST start time-Month (1~12)**

Used to set the start month of SW-41 No. 6 Summer time (Daylight saving).

SW148 No. 5 ~ No.8 DST start time-Week

Used to set the start week of SW-41 No. 6 Summer time (Daylight saving).

SW149 No. 1 ~ No. 3 DST start time-Day of week

Used to set the start day of week of SW-41 No. 6 Summer time (Daylight saving).

SW149 No. 4 ~ No. 8 DST start time-Hour

Used to set the start hour of SW-41 No. 6 Summer time (Daylight saving).

SW150 No. 1 ~ No. 4 DST end time-Month (1~12)

Used to set the end month of SW-41 No. 6 Summer time (Daylight saving).

SW150 No. 5 ~ No. 8 DST end time-Week

Used to set the end week of SW-41 No. 6 Summer time (Daylight saving).

SW151 No. 1 ~ No. 3 DST end time-Day of week

Used to set the end day of week of SW-41 No. 6 Summer time (Daylight saving).

SW151 No. 4 ~ No. 8 DST end time-Hour

Used to set the end hour of SW-41 No. 6 Summer time (Daylight saving).

SW152 No. 1 FTP mode set

Used to display the selection screen for FTP mode Passive/Active when setting up an FTP client.

SW152 No. 2 User control

Used to enable the user control function.

SW152 No. 3 Authorized method

Select an authentication method when the user control function is enabled.

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SW152 No. 4 Authorized transmission

Used to enable the authorized transmission function.

SW152 No. 5, No. 6 To be authenticated

Used to select the communication mode using the authorized transmission function.

SW152 No. 7, No. 8 Notice to the sender

Used to select the result notification method to the sender using the authorized transmission function.

SW153 No. 1, No. 2 Automatic elimination

Used to set the elimination time of the communication data using the authorized transmission function.

SW153 No. 3 Search method by right and left key

Used to set the display items when displaying the other party using the right and left keys.

SW153 No. 4 Warning when login fails

Used to specify whether or not to give warning when login fails for the third time in a row with the user control function enabled.

SW153 No. 5 ~ No. 8 Reserved

SW154 ~ SW156 No. 1 ~ No. 8 Reserved

SW157 No. 1 V.34 mode function

Used to select the V.34 mode for communication when set to "1" communication method is V.34 mode.

SW157 No. 2 V.34 mode function in case of manual communication

Used to select whether the V.34 mode is made valid when automatically transmitting/receiving.

SW157 No. 3 V.34 control channel communication speed

Used to select the control channel communication speed for V.34 mode.

SW157 No. 4 ~ No. 8 Reserved

SW158 No. 1 ~ No. 4 V.34 mode transmission speed

Used to determine the initial modem speed when communication method is V.34 transmission mode.

SW158 No. 5 ~ No. 8 V.34 mode receiving speed

Used to determine the initial modem speed when communication method is V.34 reception mode.

SW159 ~ SW241 No. 1 ~ No. 8 Reserved

SW242 No. 1 ~ No. 7 Reserved

SW242 No. 8 Pre-heat timing

Used to select whether to start pre-heat when starting reception or to start it after the print data is ready.

SW243 ~ SW300 No. 1 ~ No. 8 Reserved

[3] Troubleshooting

Refer to the following actions to troubleshoot any of the problems mentioned in 1-4.

[1] A communication error occurs.

[2] Image distortion produced.

[3] Unable to do overseas communication.

[4] Communication speed slow due to FALLBACK.

- Increase the transmission level SOFT SWITCH SW5-2, 3, 4, 5.

May be used in case [1] [2] [3].

- Decrease the transmission level SOFT SWITCH SW5-2, 3, 4, 5.

May be used in case [3].

- Apply line equalization SOFT SWITCH SW5-2, 3, 4, 5.

May be used in case [1] [2] [3] [4].

- Slow down the transmission speed SOFT SWITCH SW5-2, 3, 4, 5.
May be used in case [2] [3].
- Replace the LIU PWB.
May be used in all cases.
- Replace the control PWB.
May be used in all cases.
- If transmission problems still exist on the machine, use the following format and check the related matters.

TO: _____	ATT: _____	Ref.No.: _____
CC: _____	ATT: _____	Date: _____
FM: _____		Dept: _____
		Sign: _____

***** Facsimile communication problem *****				Ref.No.:																						
From: Mr. _____ Fax Tel No.: _____				Date: _____																						
Our customer	Name _____			Tel No. _____																						
	Address _____			Fax No. _____																						
	Contact person _____			Model name _____																						
Other party	Name _____			Tel No. _____																						
	Address _____			Fax No. _____																						
	Contact person _____			Model name _____																						
Problem mode	Line: Domestic / international		Model: G3	Phase: A, B, C, D.																						
	Reception / Transmission	Automatic reception / Manual reception																								
		Automatic dialing / Manual dialing / Others																								
Frequency: _____ %		ROM version: _____																								
Confirmation item					Please mark problem with an X. No problem is: 0.																					
					<table border="1"> <tr> <td>A1</td><td>A2</td><td>B1</td><td>B2</td><td>C1</td><td>C2</td><td>D1</td><td>D2</td><td>E1</td><td>E2</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>		A1	A2	B1	B2	C1	C2	D1	D2	E1	E2										
					A1	A2	B1	B2	C1	C2	D1	D2	E1	E2												
					Transmission level setting is () dB at our customer																					
Transmission level () dBm																										
Reception level () dBm By level meter at B1 and B2																										
Comment																										
Countermeasure																										

**** Please attach the G3 data and activity report on problem. ****

* Please complete this report before calling the "TAC" hotline if problem still occurs.

[4] Error code table**1. Communication error code table****1.1. G3 Transmission**

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSF, DIS	Cannot recognize DCS signal by echo etc. Cannot recognize NSS signal (FIF code etc.)
2	CFR	Disconnects line during reception (carrier missing etc.)
3	FTT	Disconnects line by fall back
4	MCF	Disconnects line during reception of multi page Cannot recognize NSS, DCS signal in the case of mode change
5	PIP or PIN	The line is hung up without replying to telephone request from the receiving party.
6	RTN or RTP	Cannot recognize NSS, DCS signal after transmit RTN or RTP signal.
7	No signal or DCN	No response in receiver side or DCN signal received* (transmitter side)
8	-	Owing to error in some page the error could not be corrected although the specified number of error retransmissions were attempted.
11	-	Error occurred after or while reception by the remote (receiving) machine was revealed to be impossible.
12	-	Error occurred just after fallback.
13	-	Error occurred after a response to retransmission end command was received.

1.2. G3 Reception

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSS, DCS	Cannot recognize CFR or FTT signal Disconnects line during transmission (line error)
2	NSC, DTC	Cannot recognize NSS signal (FIF code etc.)
3	EOP	Cannot recognize MCF, PIP, PIN, RTN, RTP signal
4	EOM	Cannot recognize MCF, PIP, PIN, RTN, RTP signal in the case of mode change
5	MPS	The line is hung up without replying to communication request.
6	PR1-Q	Cannot recognize PIP, PIN signal in the case of TALK request
7	No signal or DCN	No response in transmitter (cannot recognize DIS signal) or DCN signal received* (receiver side)
8	-	Error occurred upon completion of reception of all pages.
9	-	Error occurred when mode was changed or Transmission/Reception switching was performed.
10	-	Error occurred during partial page or physical page reception.
11	-	Error occurred after or during inquiry from the remote (transmitting) machine as to whether reception is possible or not.
12	-	Error occurred during or just after fallback.
13	-	Error occurred after the retransmission end command was received.

CHAPTER 3. MECHANICAL DESCRIPTION

[1] Mechanical description

1. Facsimile block

1.1. Document feed block and diagram

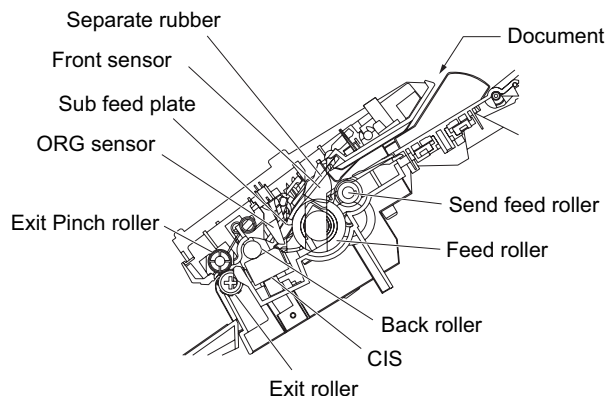


Fig. 1

2. Document feed operation

- 1) As shown in Fig.1, the document set in the hopper (the front sensor is on) is fed with the let out roller and paper feed roller which rotate together with the pulse motor.
- 2) When a specified number of pulses are received from the document sensor after the document lead edge is sensed, scanning will be started.
- 3) When a specified number of pulses are received from the document sensor after the document rear edge is sensed, scanning will be ended to discharge the document to the tray.
- 4) If the front sensor is on (the document is set up in the hopper), the next document is supplied and fed nearly when the last document is completely read and discharged. If the front sensor is off (no document is set up in the hopper), the drive will be stopped when the document is discharged to the tray.

3. Hopper mechanism

3.1. General view

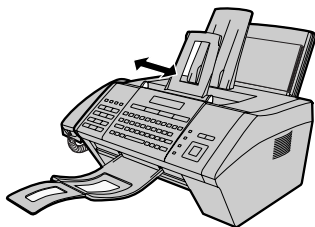


Fig. 2

The hopper is used to align documents with the document guides adjusted to the paper width.

NOTE: Adjust the document guides before and after inserting the document.

3.2. Automatic document feed

- 1) The structure with secure paper feed of the transfer roller and secure separation of the separation rubber system is employed. The transfer roller is circular as to be rotated only when the paper feed roller is driven with the 2-step paper feed clutch mechanism. Moreover, the separation is securely done by running the paper feed and transfer rollers more slowly than the feed roller/

- 2) Document separation system:

Separation rubber/speed reduction ratio/roller backlash separation system.

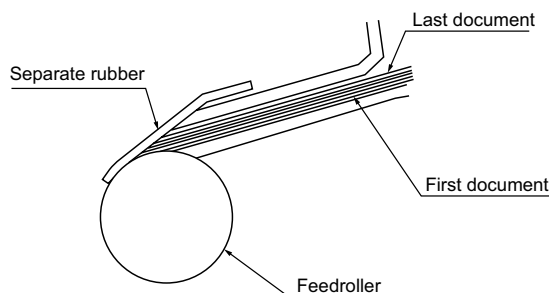


Fig. 3

3.3. Loading the documents

- 1) Make sure that the documents are of suitable size and thickness, and free from creases, folds, curls, wet glue, wet ink, clips, staples and pins.
- 2) Place documents face down in the hopper.
 - Adjust the document guides to the document width.
 - Align the top edge of documents and gently place them into the hopper. The first page under the stack will be taken up by the feed roller to get ready for transmission.

NOTE: 1) Curled edge of documents, if any, must be straighten out.

- 2) Do not load the documents of different sizes and/or thicknesses together.

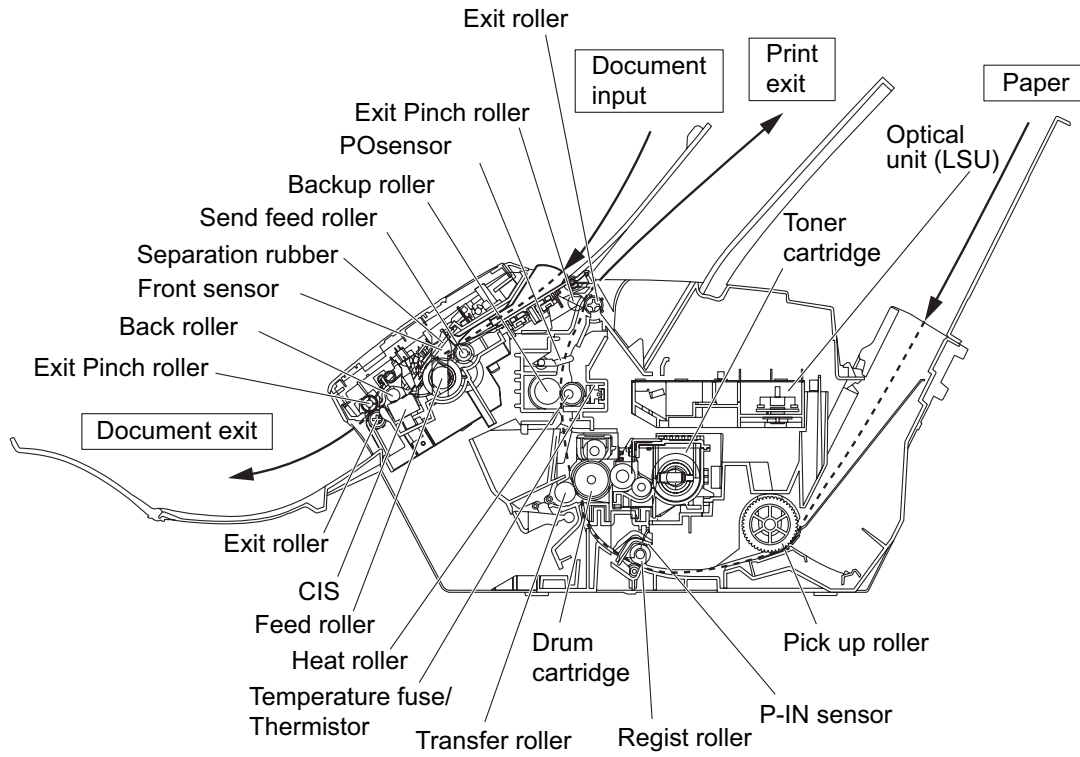
3.4. Documents applicable for automatic feed

	Indication	Product specifications	
		Lower Limit	Upper Limit
Weight indication	Metric system indication	52g/m ²	80g/m ²
Thickness indication	Metric system indication	0.06mm	0.1mm
Document size	Document size Range	Minimum (148mm x 70mm)	
		A4 (210mm x 297mm)	
		Letter (216mm x 279mm)	
Number of ADF sheets	Document size Weight	Legal (216mm x 356mm)	
		Minimum ~ Letter/A4 size 30sheets	
		Legal 5 sheets	
Paper quality	Kind	More than 90 kg	
		Below 135 kg 1 sheet	
Paper quality	Kind	Paper of fine quality/bond paper/	
		Kent paper	

NOTE: Double-side coated documents and documents on facsimile recording paper should be inserted manually.

Documents corresponding to a paper weight heavier than 90 kg and lighter than 135 kg are acceptable for manual feed.

Documents heavier than 135 kg in terms of the paper weight must be duplicated on a copier to make it operative in the facsimile.

4. Paper path**Fig. 4**

5. Components layout

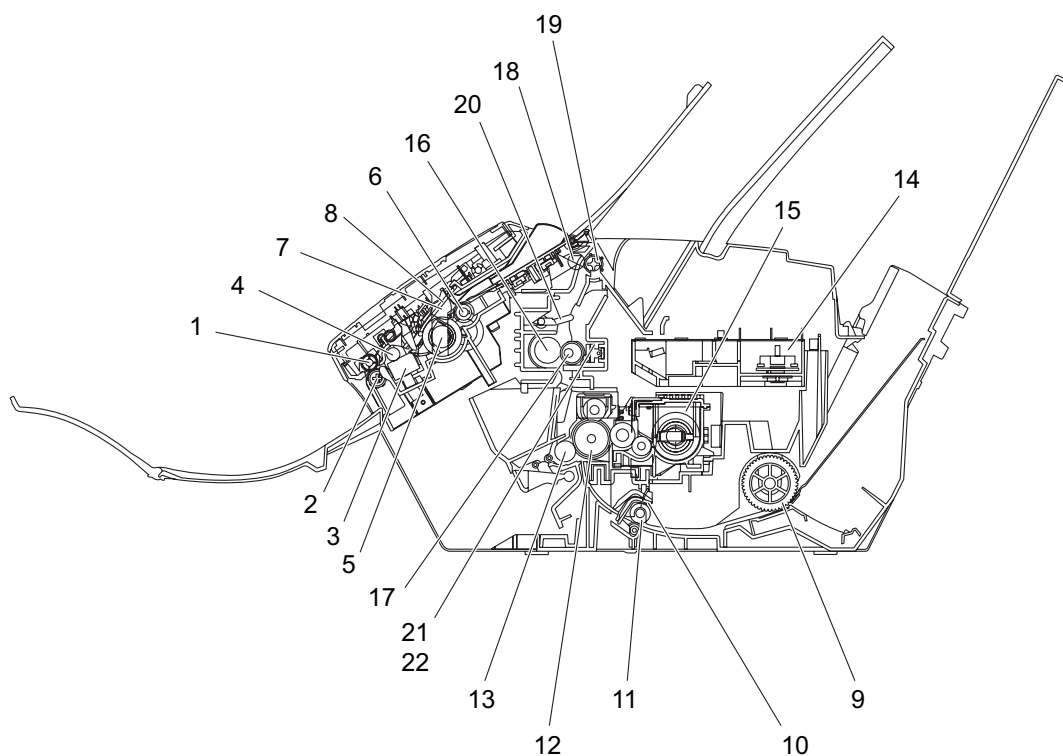


Fig. 5

No.	PARTS NAME	No.	PARTS NAME
1	Exit pinch roller	12	Drum cartridge
2	Exit roller	13	Transfer roller
3	CIS	14	Optical unit (LSU)
4	Back roller	15	Toner cartridge
5	Feed roller	16	Backup roller
6	Send feed roller	17	Heat roller
7	Front sensor	18	Exit pinch roller
8	Separation rubber	19	Exit roller
9	Pickup roller	20	PO sensor
10	P-IN sensor	21	Temperature fuse
11	Regist roller	22	Thermistor

6. Switch/Sensor layout

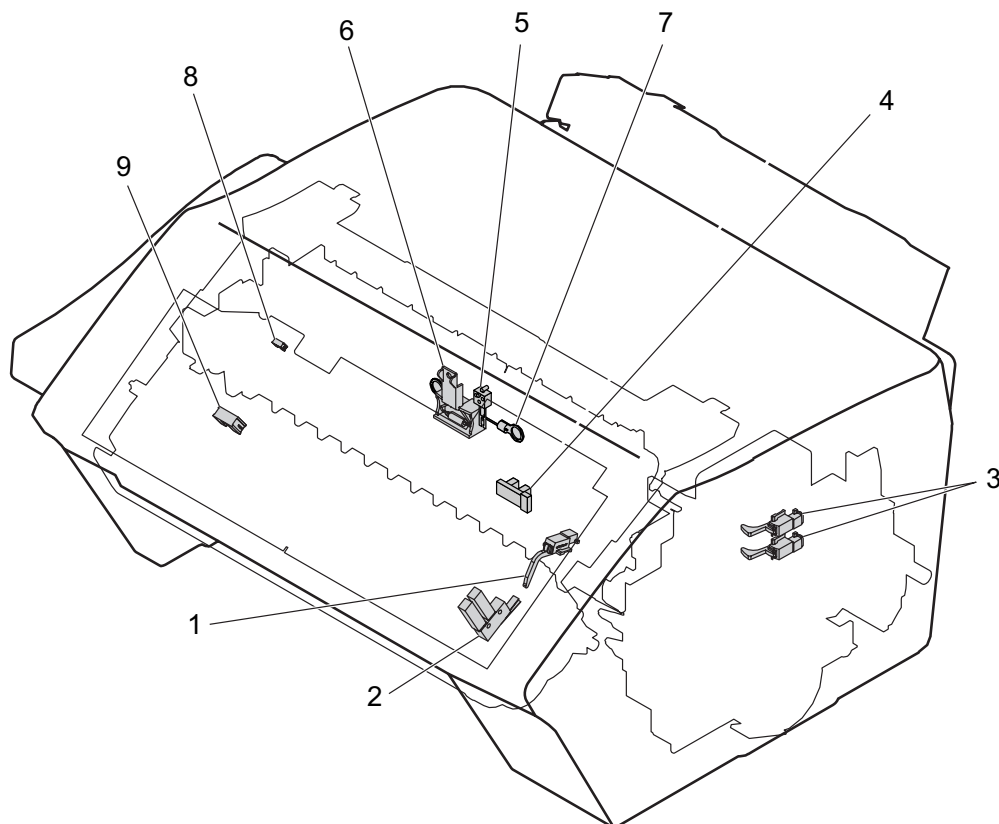


Fig. 6

No.	PARTS NAME	TYPE	DESCRIPTION
1	P-IN sensor	Microcircuit	When this switch is turned on, paper transport.
2	Interlock switch	Microcircuit	Detects the opening or closing of the Front Cover.
3	Toner cartridge sensor	Microcircuit	Detects when the Toner Cartridge is set.
4	Paper out sensor	Photo transistor	Detects when the paper is fed out.
5	Thermistor	Thermistor	Detects the temperature on the heat roller.
6	Temperature fuse 216°C	Thermal fuse	When the heat roller temperature rises abnormally, this fuse cuts off the power relay power line (+24 V line).
7	Temperature fuse 152°C	Thermal fuse	When the heat roller temperature rises abnormally, this fuse cuts off the heater lamp power line.
8	Front sensor	Microcircuit	When the document is set up in the hopper, the front sensor is on.
9	ORG sensor	Microcircuit	When the ORG sensor is on, the document is fed and scanning will be started.

7. Print process

7.1. Image forming process

Normal paper is used as print paper. A laser beam is used to expose on the OPC surface to form latent electrostatic images, which are developed into visible images (toner images) and are transferred on paper. The basic operation is composed of the five processes: charging, exposure, development, transfer, and cleaning.

7.2. System diagram (1)

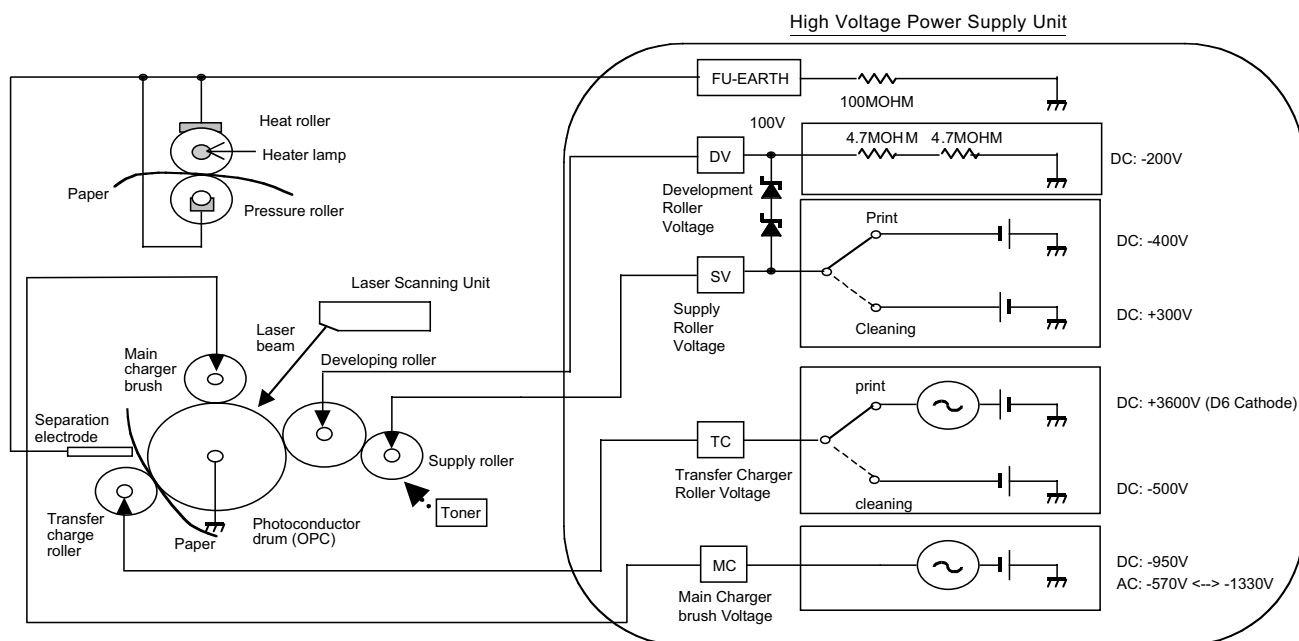


Fig. 7

7.3. System diagram (2)

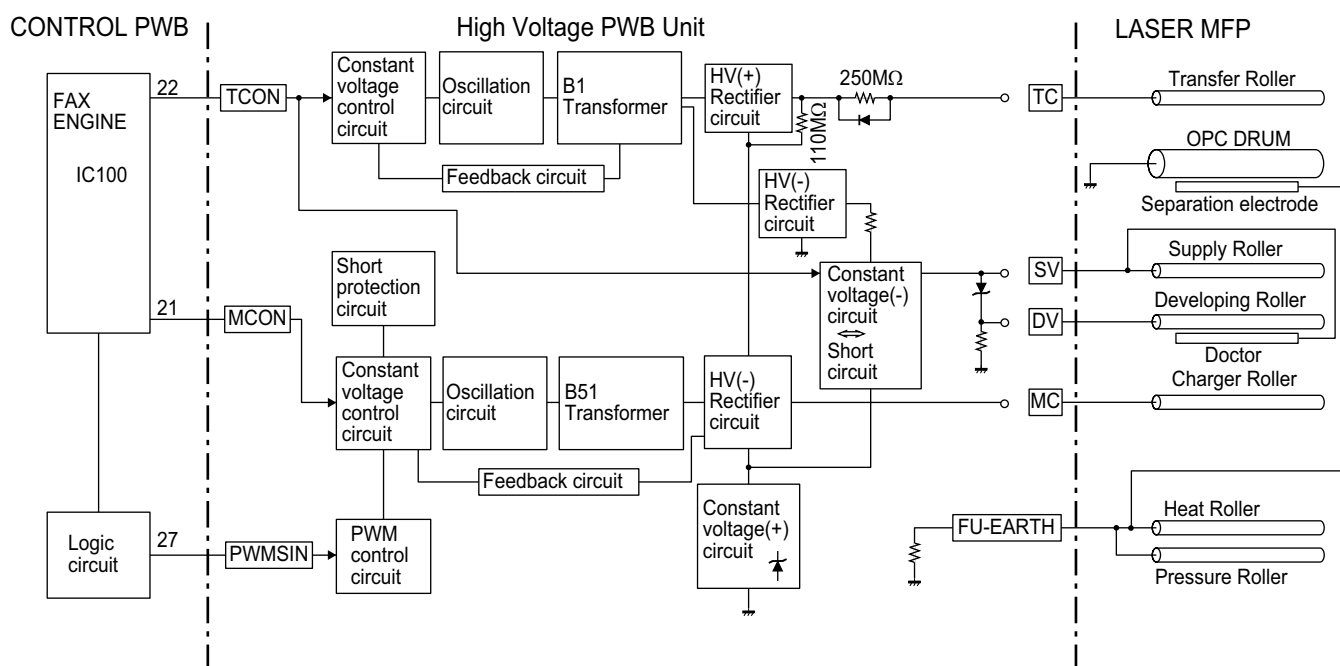


Fig. 8

7.4. Image forming process diagram

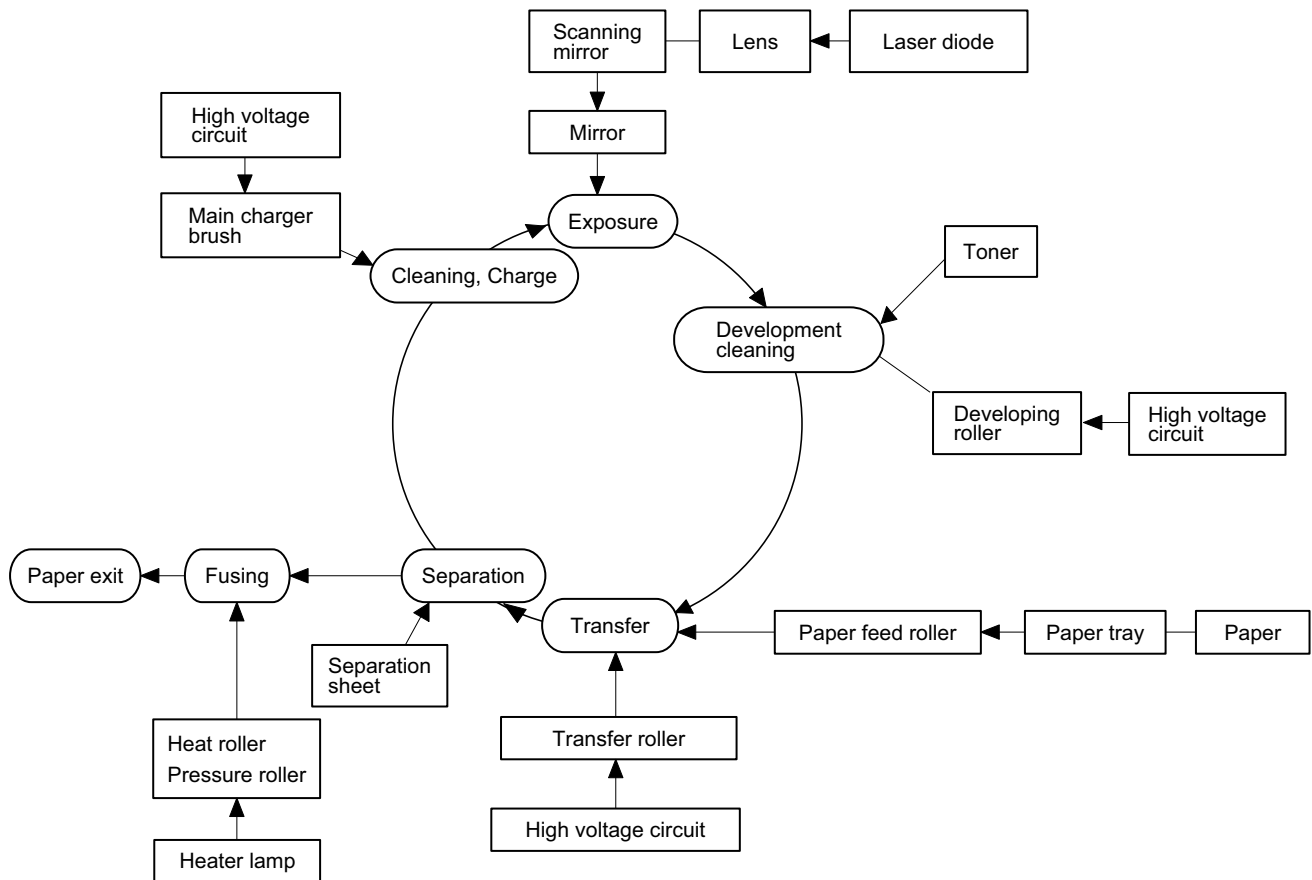


Fig. 9

7.5. Functions and operations of major parts

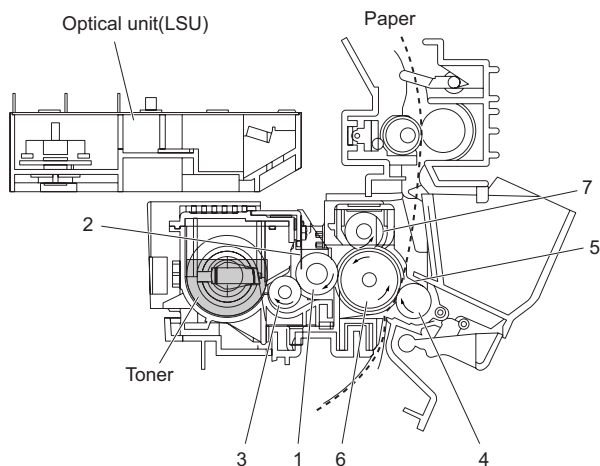


Fig. 10

1	Developing roller	5	Separation sheet
2	Doctor	6	OPC drum
3	Toner supply roller	7	Main charger brush
4	Transfer roller		

7.5.1 OPC drum unit

The OPC drum is charged and latent electrostatic images are formed on it and developed into visible toner images.

a. OPC drum

Latent electrostatic images are formed and developed into toner images on the OPC drum.

Organic Photo Conductor is used. The OPC surface is charged negatively by the main charger brush.

When the OPC is exposed to laser beam, the electric resistance of the exposed section falls and electric charge is generated in the OPC. As a result, electric charge on the OPC surface is removed. This principle is used to form latent electrostatic images.

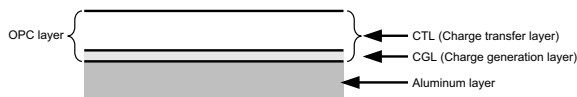


Fig. 11

b. Main charger brush

The main charger brush charges the OPC drum surface. It is composed of brush fiber, and is in the shape of a roller. A high voltage of AC 760V (P-P) and DC-950V are applied to charge the brush.

The main charger brush is in contact with the OPC drum. BY applying electric charge to the OPC drum, the OPC drum is charged to about DC-900V.

7.5.2 Developing unit

Latent electrostatic images formed by laser beam on the OPC drum are developed to visible images by the developing unit. Toner is filled in the developing unit.

a. Developing roller

The developing roller is made of silicon and has a high electric resistance. It is flexible and is in close contact with the OPC drum. Toner on the developing roller is attached to latent electrostatic images on the OPC drum to form visible images on the OPC drum.

A voltage of DC-220V is applied the developing roller.

b. Doctor

The doctor is in close contact with the developing roller. It adjusts toner quantity on the developer roller surface.

The doctor is made of conductive material.

c. Toner supply roller

Toner is supplied to the developing roller by the sponge roller which is connected to the developing roller.

7.5.3 Transfer charger roller

The transfer charger roller is made of urethane and has a high electric resistance. It is flexible and is in close contact with the OPC drum.

A high voltage of AC 760V (P-P) and DC +3600V are applied to charge.

It positively charges paper transported from the paper feed section, which transfers negatively charged toner on the OPC drum onto the paper.

7.5.4 Separation sheet

This sheet is connected to the drum ground. It discharges paper which was positively charged in the transfer section to reduce the potential difference with the OPC drum to reduce static electricity between the paper and the OPC drum, thus facilitating separation of paper.

7.6. Image forming operation

STEP 1 (Cleaning, Charging):

Residual toner the OPC drum is stirred and negative charges are scattered evenly on the OPC drum. (The OPC drum surface is evenly charged.)

The main charger is a rotating brush roller.

The main charger removes residual toner from the OPC drum by its rotating sweeping action and causes it to stick to the brush.

At the same time, a high voltage of -950V is applied to the main charger roller to generate a discharge of electricity between the roller and the OPC drum, generating positive and negative charges. The negative charges are attracted to the OPC drum, and evenly distributed on the OPC drum. (The OPC drum surface is evenly charged.)

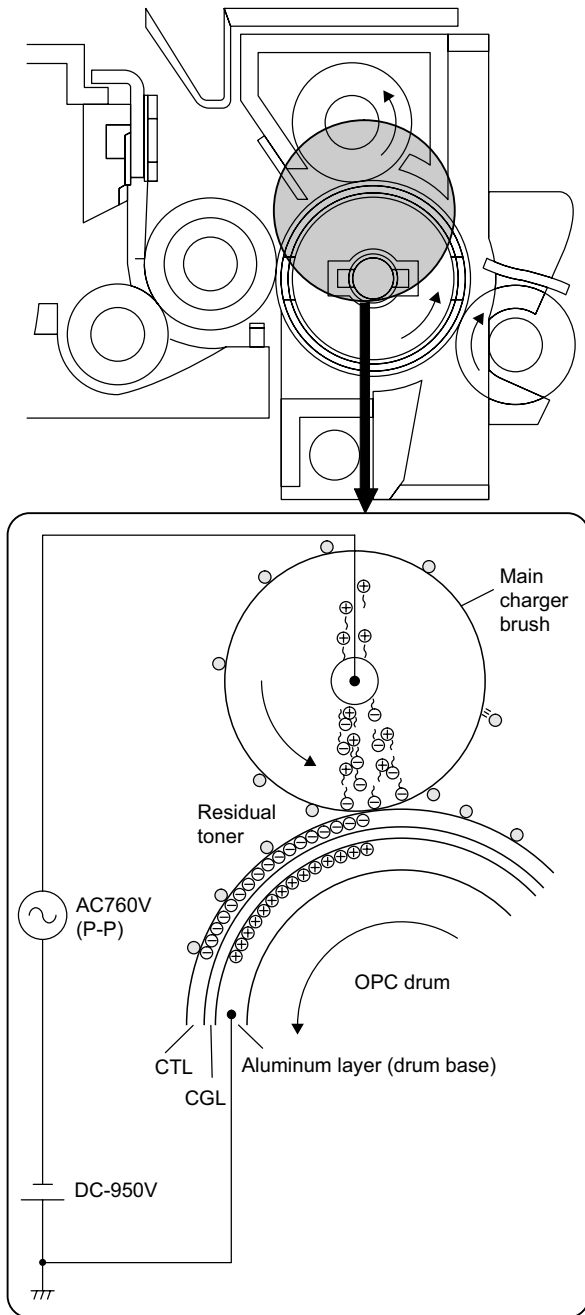


Fig. 12

STEP 2 (Exposure):

Laser beam scanning light corresponding to the print data is radiated on the OPC drum.

Positive and negative charges are generated in the OPC drum CGL exposed with the laser beam.

Positive charges generated in the CGL are attracted toward the OPC drum surface (negative charges), and negative charges toward the aluminum layer (positive charges).

Therefore, the positive and negative charges neutralize each other in the laser-exposed area of the OPC drum surface and the aluminum layer, decreasing the potential of the OPC drum surface.

The area which is not exposed to laser beam has no change, and the OPC drum surface remains negatively charged to keep a high potential. As a result, latent electrostatic images are formed on the OPC drum.

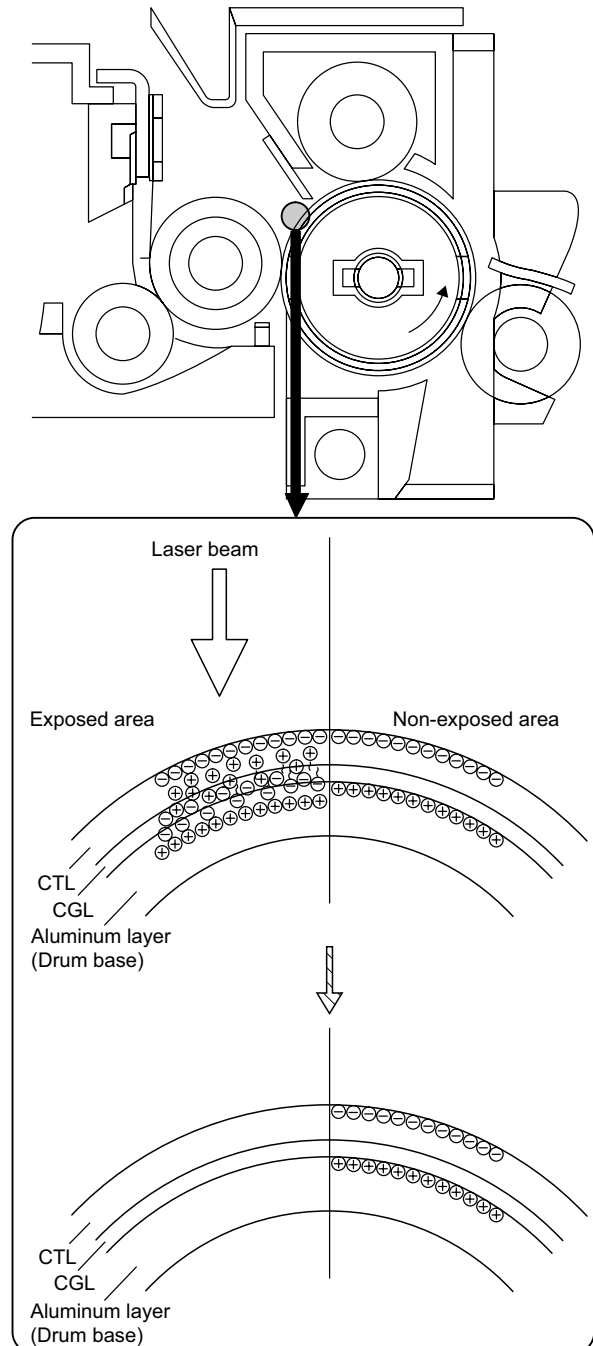


Fig. 13

STEP 3 (Development): Toner is attached to the latent electrostatic images on the OPC drum to form visible images.

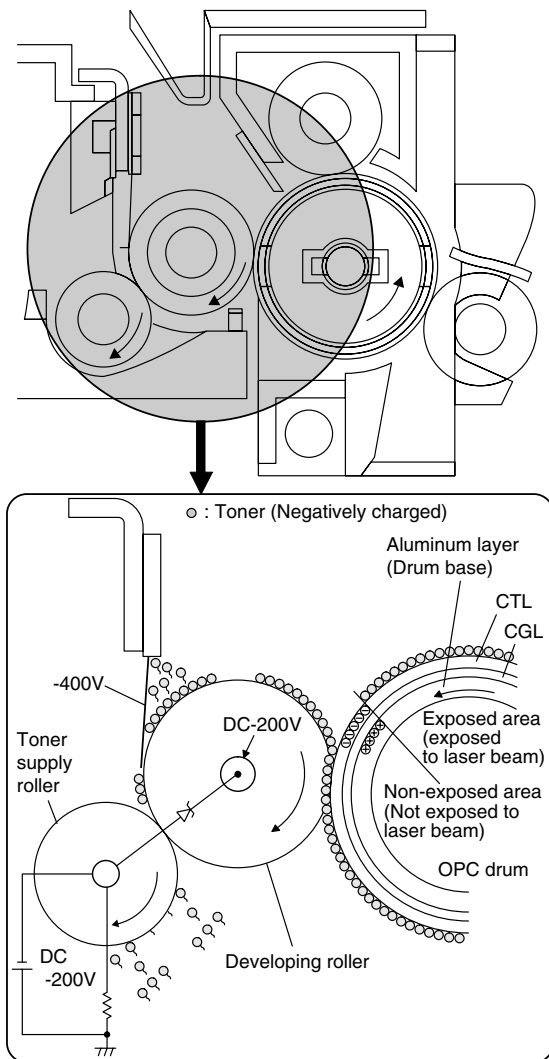


Fig. 14

Toner is transported to the scraper area by the toner supply roller and the developing roller. The quantity of toner to be transported to the doctor section is controlled by the scraper. Toner transported to the doctor section is then passed between the developing roller and the doctor to form a thin toner layer on the developing roller by the pressure applied by the doctor.

When toner passes between the developing roller and the doctor, it is charged negatively by friction.

When an area of OPC drum which was exposed to laser beam and lost its charge comes in contact with the developing roller, toner moves from the developing roller to the OPC drum surface.

The principle of toner movement from the developing roller to the OPC drum surface is as follows.

The bias voltage of DC-220V is applied to the developing roller. Toner is charged negatively by the difference (electrical energy) between the bias voltage and the OPC drum surface potential and is attracted to the OPC drum surface which is positively charged.

At that time, the laser potential of the area of the OPC drum which was exposed to the laser beam and lost its charge is higher than that of the developing roller.

On the other hand, when an area of OPC drum which was not exposed to the laser beam and did not lose its charge comes in contact with the developing roller, any residual toner attached to the OPC drum is transferred to the developing roller which is more positively charged.

As a result, unnecessary toner on the OPC drum is collected by the developing unit.

The operating principle for that case is contrary to that for transfer of toner from the developing roller to the OPC drum surface. (The electric field energy direction is contrary.)

STEP 4 (Transfer): Visible images of toner on the OPC drum are transferred to the paper.

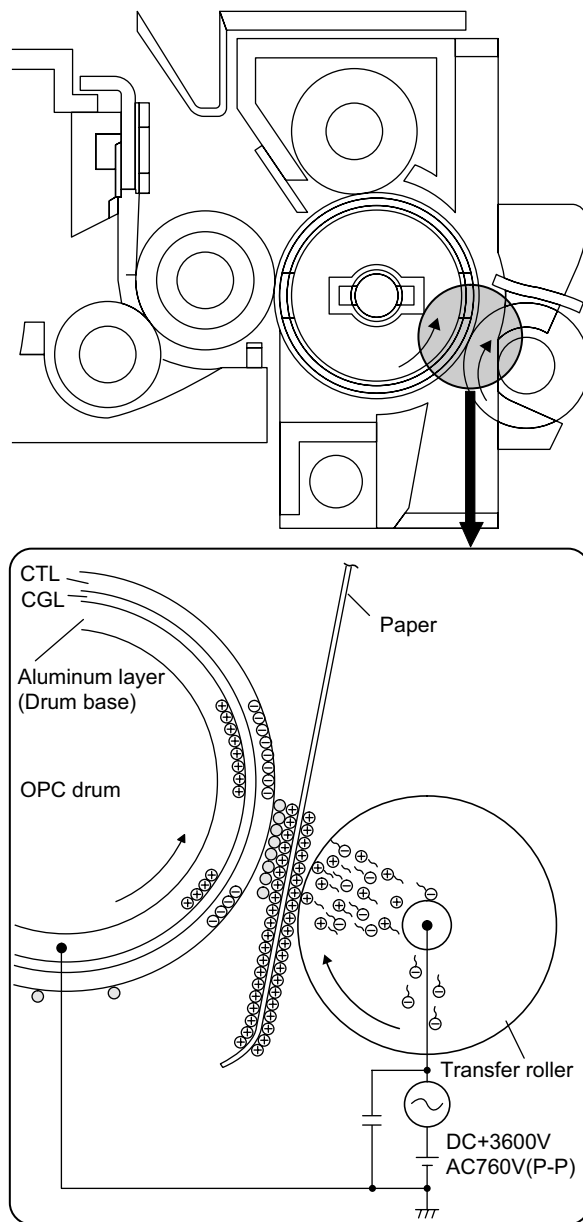


Fig. 15

The high voltage of DC+3600V plus AC760V (P-P) is applied to the transfer roller to generate electric discharge between the roller and the OPC drum, generating positive and negative charges. Positive charges are attracted to the OPC drum and attached to the paper transported between the transfer roller and the OPC drum. Therefore the paper has a strong positive charge.

Negatively charged toner on the OPC drum is attracted by the paper which is positively charged, and the visible images of toner are transferred onto the paper.

STEP 5 (Paper separation): The paper is separated from the OPC drum.

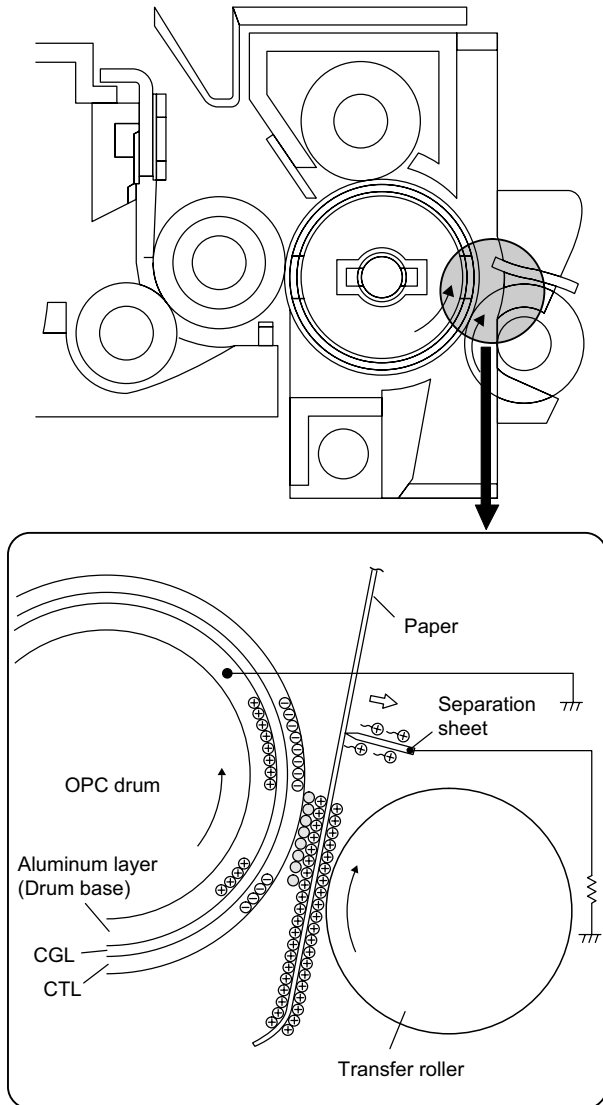


Fig. 16

There is an electrostatic force between the paper which is positively charged in transfer operation and the OPC drum which is negatively charged. The positive charge on the paper is released to the separation electrode, which is the same potential as the aluminum layer of the OPC drum, to reduce the potential difference between the OPC drum and the paper, reducing the electrostatic force.

This operation facilitates separation of the paper from the OPC drum.

STEP 6 (Dis-charge):

The drum surface is discharged to facilitate cleaning of the drum surface. (The remaining toner is easily collected by the main charger roller.)

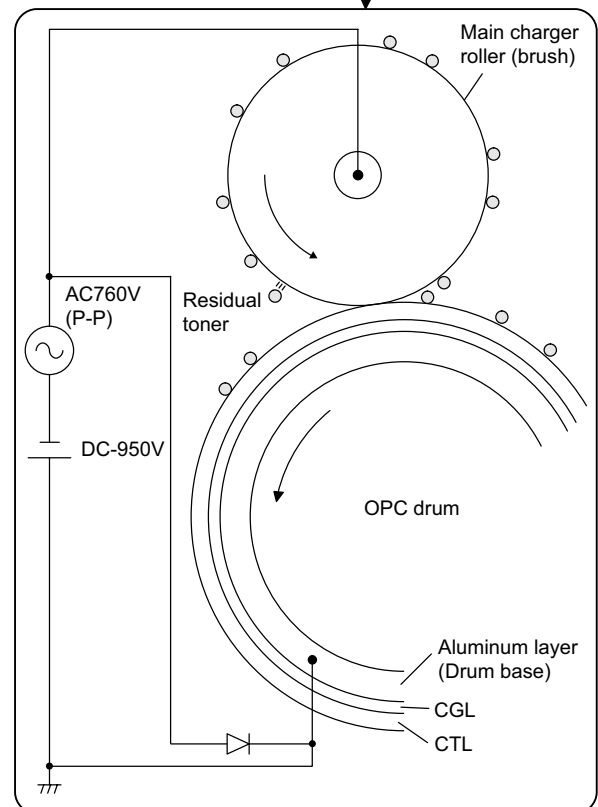
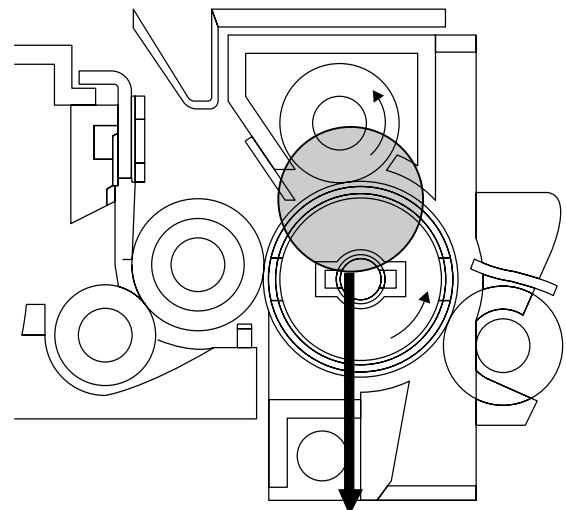


Fig. 17

STEP 7 (Cleaning):

Residual toner on the OPC drum is removed.

The main charger is a rotating brush roller.

The main charger removes residual toner from the OPC drum by its rotating sweeping action and causes it to stick to the brush. The main charger brush is in close contact with the mesh-type brush cleaning plate which removes toner and paper dust from the main charger brush mechanically.

7.7. OPC drum surface potential

7.7.1 Transition of OPC drum surface potential by print operation

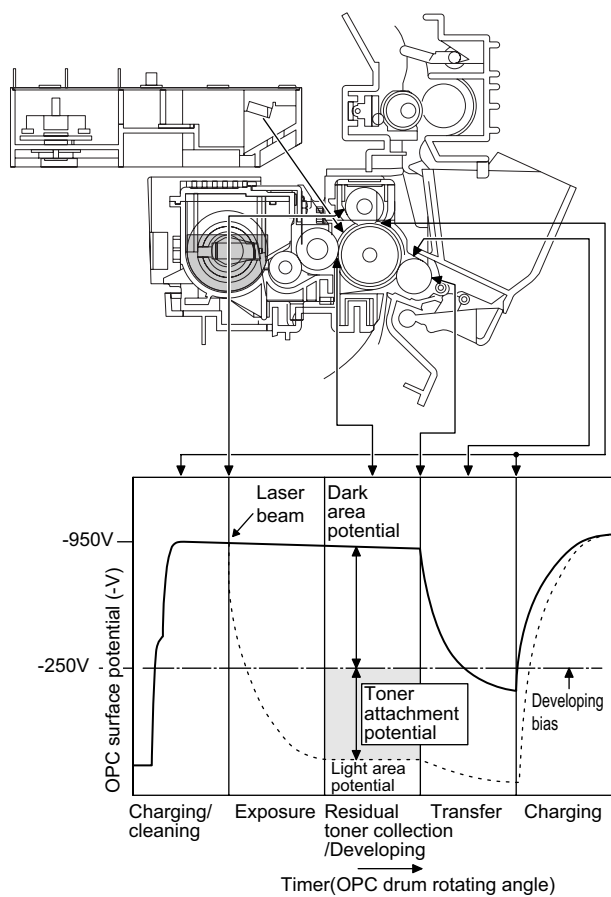


Fig. 18

7.7.2 OPC drum surface potential and developing bias voltage in development

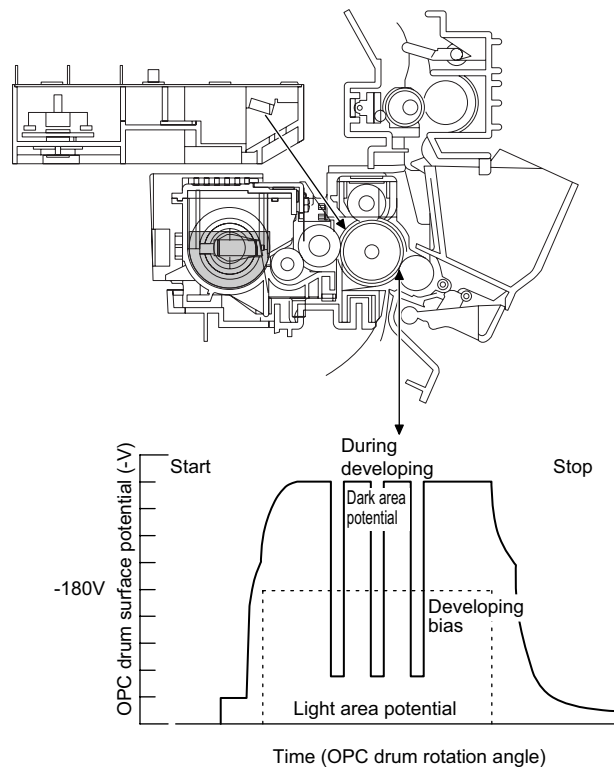
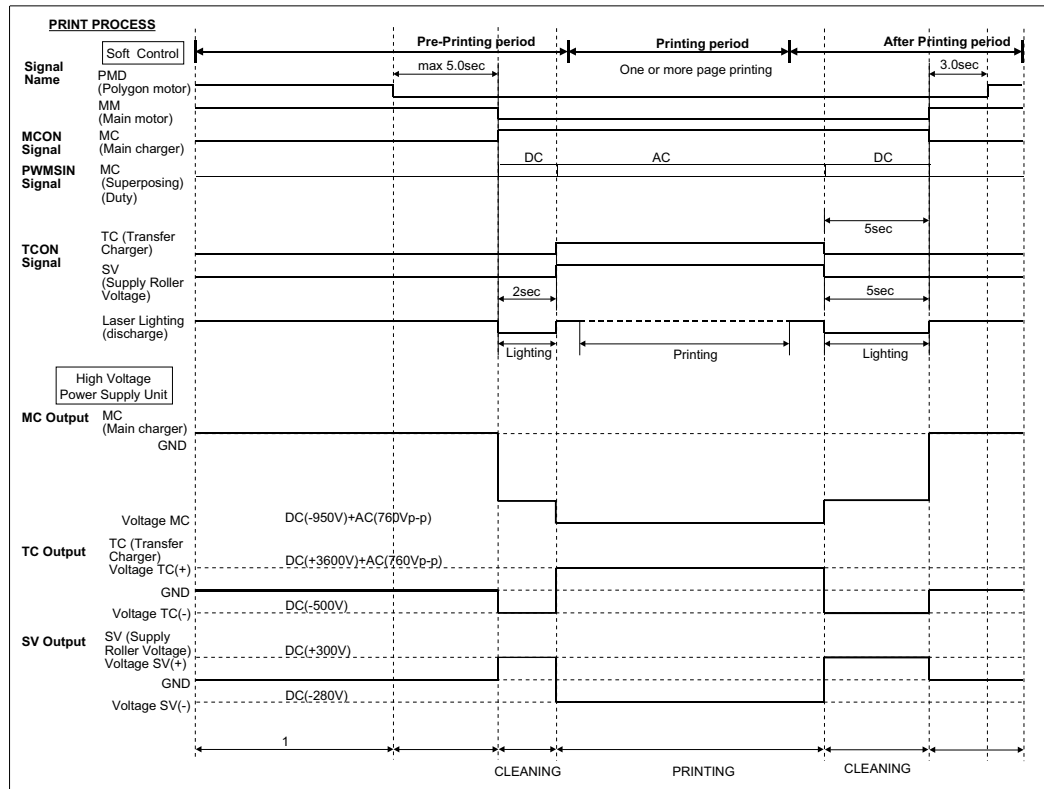


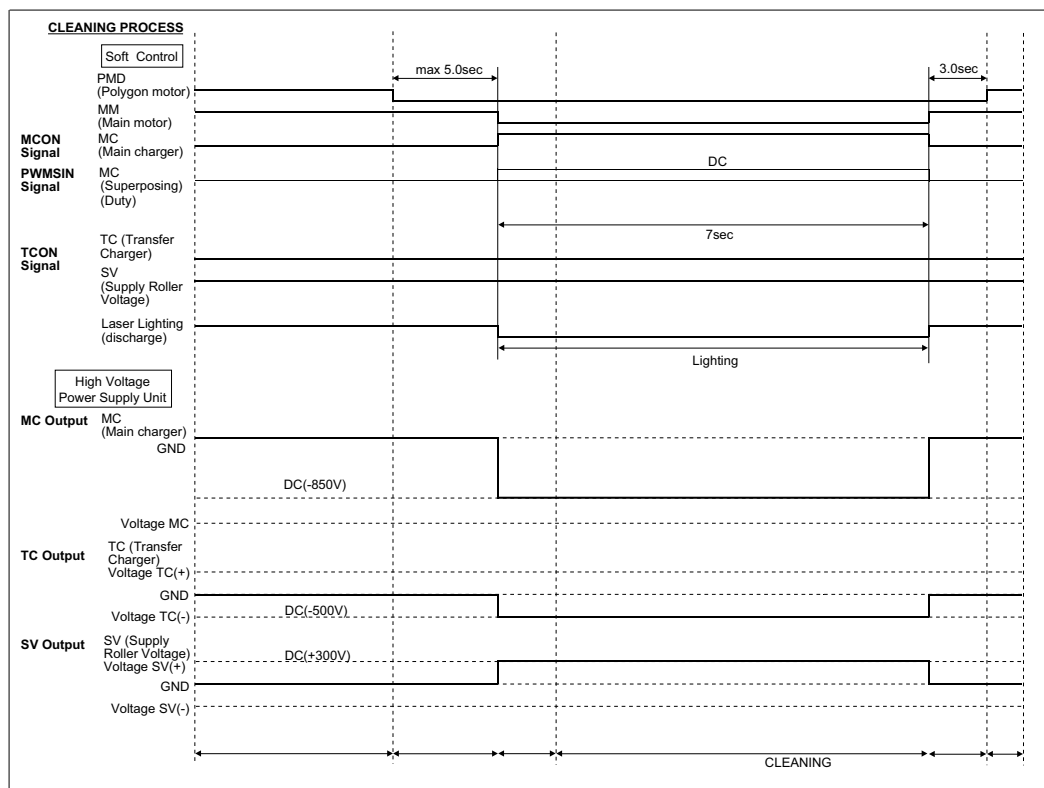
Fig. 19

8. Timing chart

8.1. Print process



8.2. Cleaning process



[2] Disassembly and assembly procedures

- This chapter mainly describes the disassembly procedures. For the assembly procedures, reverse the disassembly procedures.
- Easy and simple disassembly/assembly procedures of some parts and units are omitted. For disassembly and assembly of such parts and units, refer to the Parts List.
- The numbers in the illustration, the parts list and the flowchart in a same section are common to each other.
- To assure reliability of the product, the disassembly and the assembly procedures should be performed carefully and deliberately.

1. Top cabinet

NOTE: For disassembly of the inside of the unit, refer to the exploded view in the parts guide.

Parts list (Fig. 1)

No.	Part name	Qty
1	Mechanism unit	1
2	Screw (3x10)	4
3	Screw (3x8)	2
4	Hook	6
5	Connector	1
6	Top cabinet	1

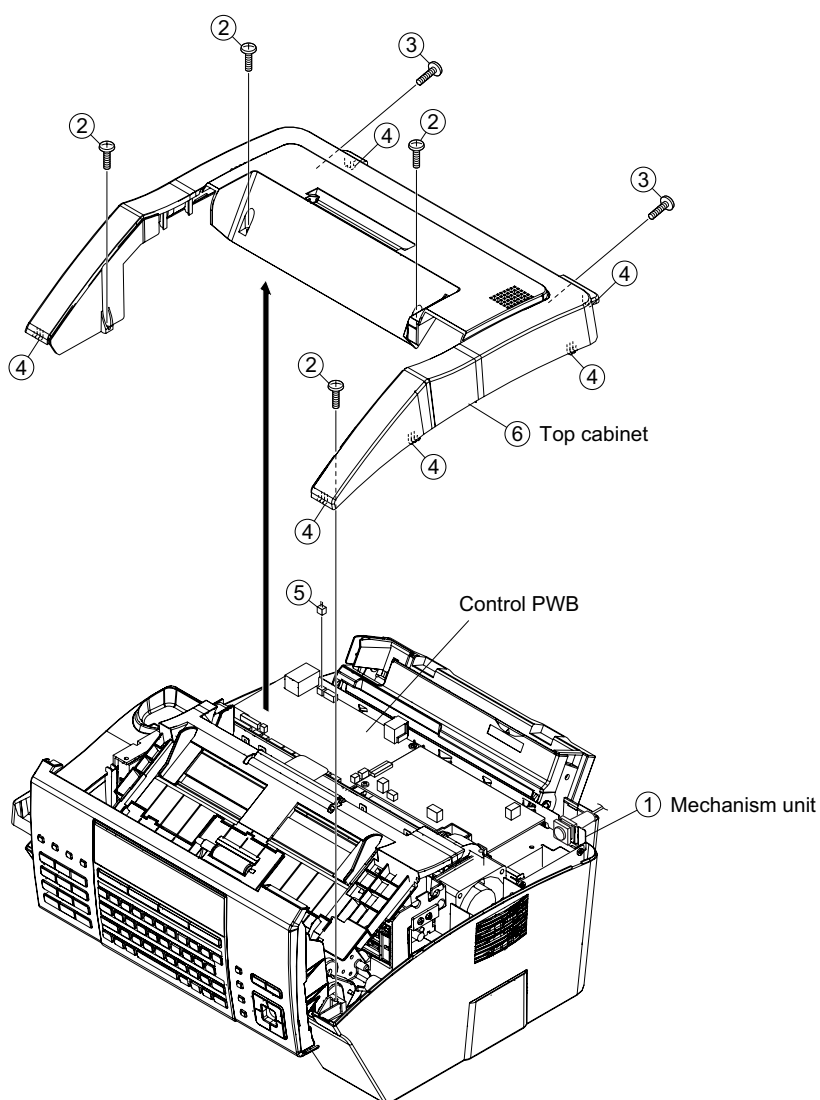


Fig.1

2. Motor cover/Handset holder unit/Bottom cabinet

NOTE: For disassembly of the inside of the unit, refer to the exploded view in the parts guide.

Parts list (Fig. 2)

No.	Part name	Qty	No.	Part name	Qty
1	Mechanism unit	1	6	Connector	1
2	Screw (3x10)	1	7	Handset holder unit	1
3	Hook	2	8	Screw (3x10)	5
4	Motor cover	1	9	Screw (2.6x8)	1
5	Screw (3x10)	3	10	Bottom cabinet	1

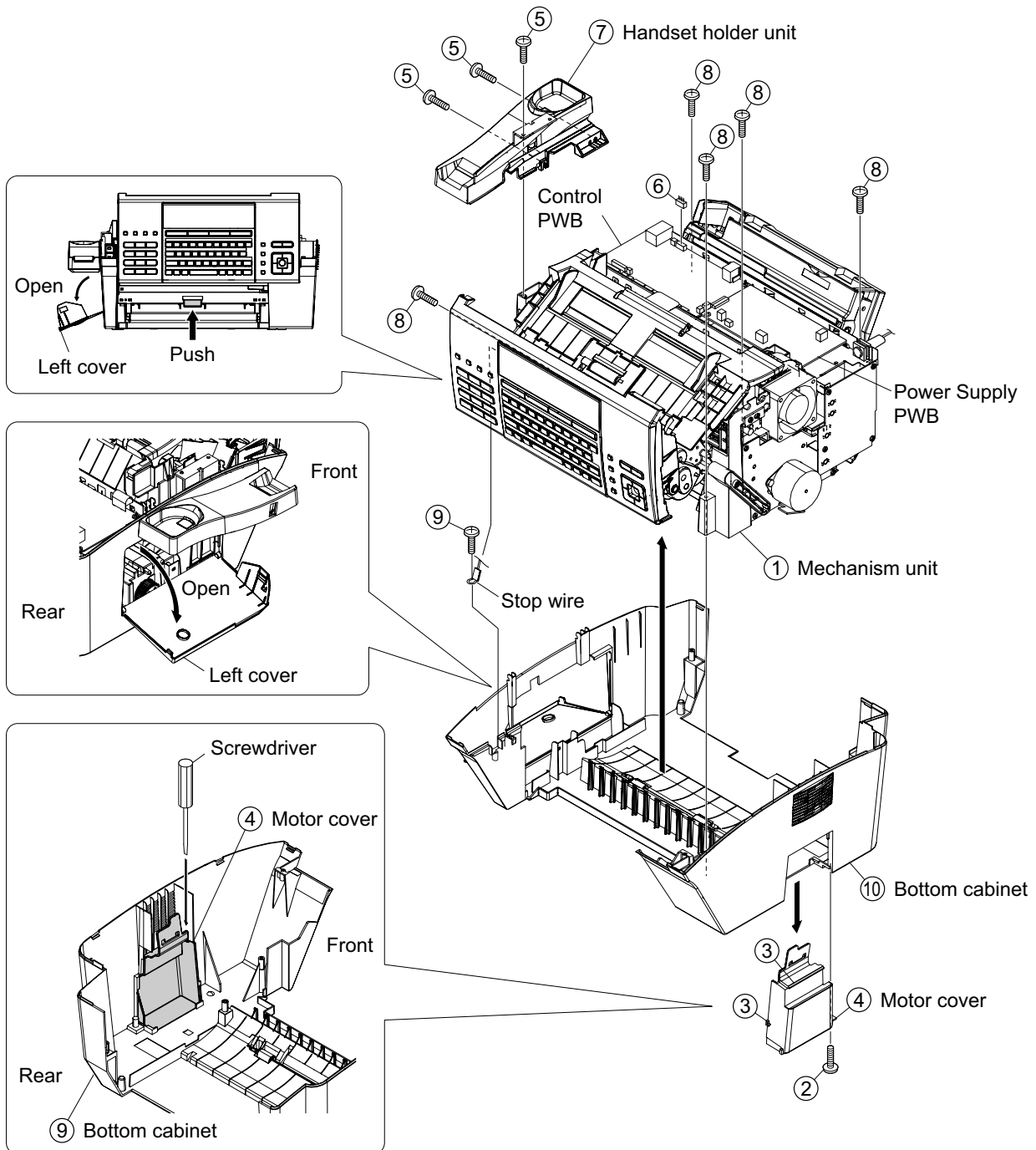


Fig.2

3. Paper hopper unit/PWB's/Operation panel unit

NOTE: For disassembly of the inside of the unit, refer to the exploded view in the parts guide.

Parts list (Fig. 3)

No.	Part name	Qty	No.	Part name	Qty
1	Mechanism unit	1	9	Flat cable	1
2	Screw (3x10)	2	10	Connector	12
3	Paper hopper unit	1	11	Control PWB unit	1
4	Screw (3x8)	2	12	Screw (3x6)	3
5	Screw with washer (4x6)	1	13	Screw (3x10)	1
6	Connector	4	14	Connector	1
7	Power supply PWB unit	1	15	High voltage PWB unit	1
8	Screw (3x10)	4	16	Screw with washer (3x10)	1
			17	Operation panel unit	1

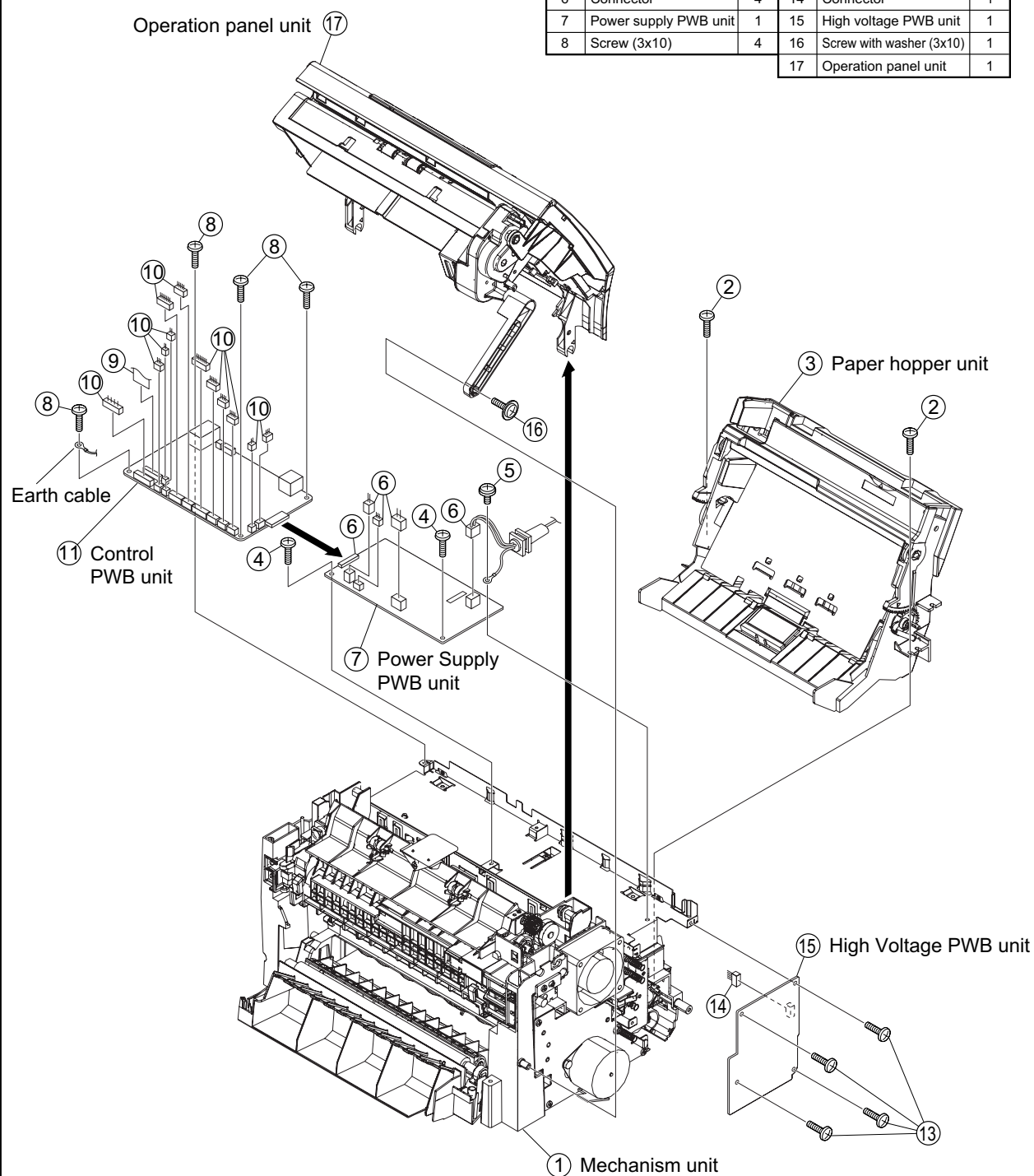


Fig.3

4. Paper hopper

Parts list (Fig. 4)

No.	Part name	Qty	No.	Part name	Qty
1	Paper hopper unit	1	7	Rotation plate	1
2	Screw with washer (3x10)	2	8	Paper pad	1
3	RP release spring	1	9	Coil spring	3
4	RP release gear, right	1	10	A4 paper guide	1
5	RP release gear, left	1	11	Paper hopper	1
6	RP release plate	1			

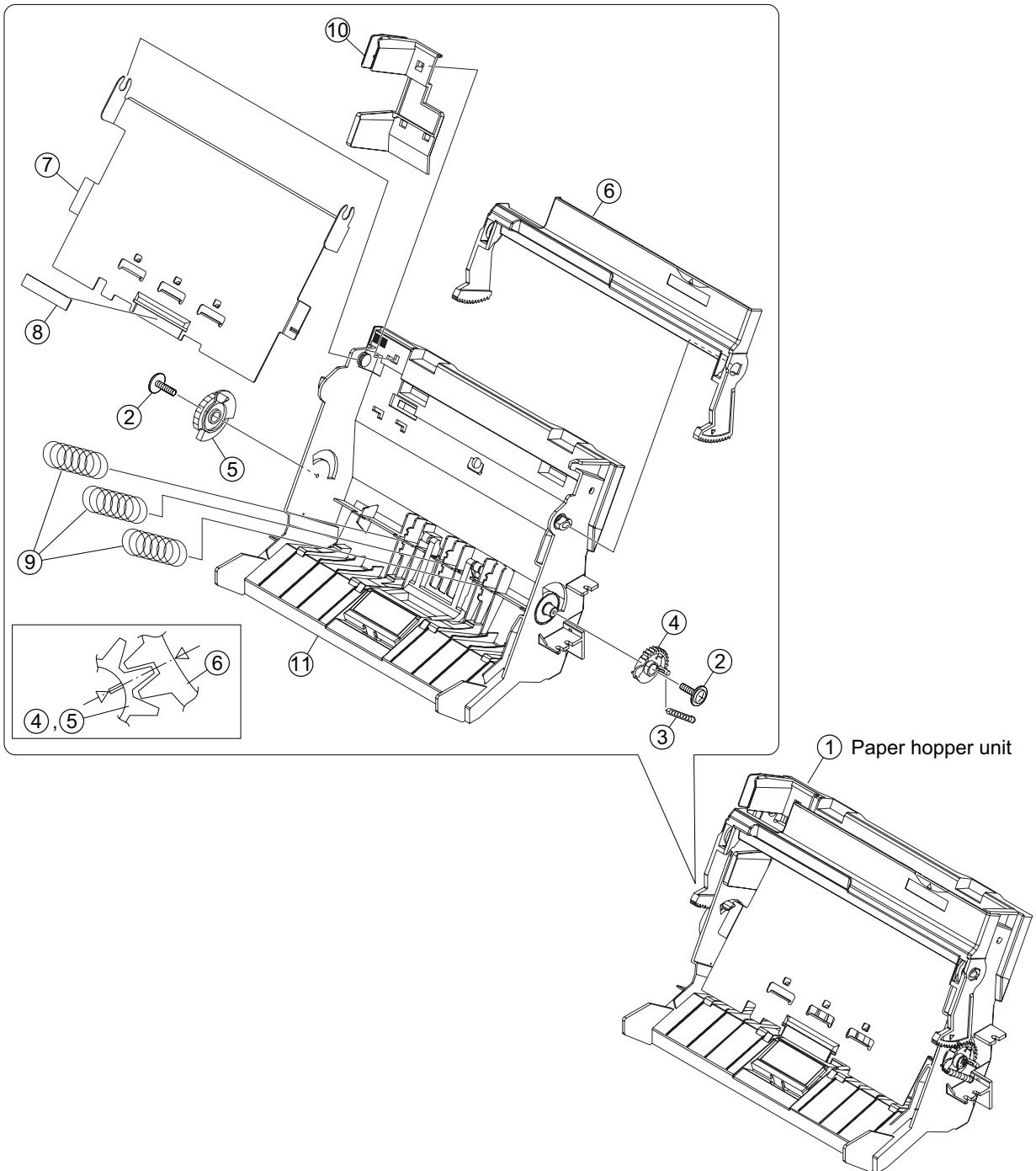


Fig.4

5. Front cover unit/PU guide upper unit/PWB plate/Optical unit/Fusing unit/Drive unit

NOTE: For disassembly of the inside of the unit, refer to the exploded view in the parts guide.

Parts list (Fig. 5)

No.	Part name	Qty	No.	Part name	Qty
1	Mechanism unit	1	9	Screw (3x10)	4
2	Hook	1	10	Optical unit	1
3	Front cover unit	1	11	Hook	2
4	Screw (3x10)	2	12	Special screw (3x12)	2
5	PU guide upper unit	1	13	Fusing unit	1
6	Screw (3x10)	4	14	Screw (3x10)	4
7	Screw (3x6)	1	15	Drive unit	1
8	PWB plate	1			

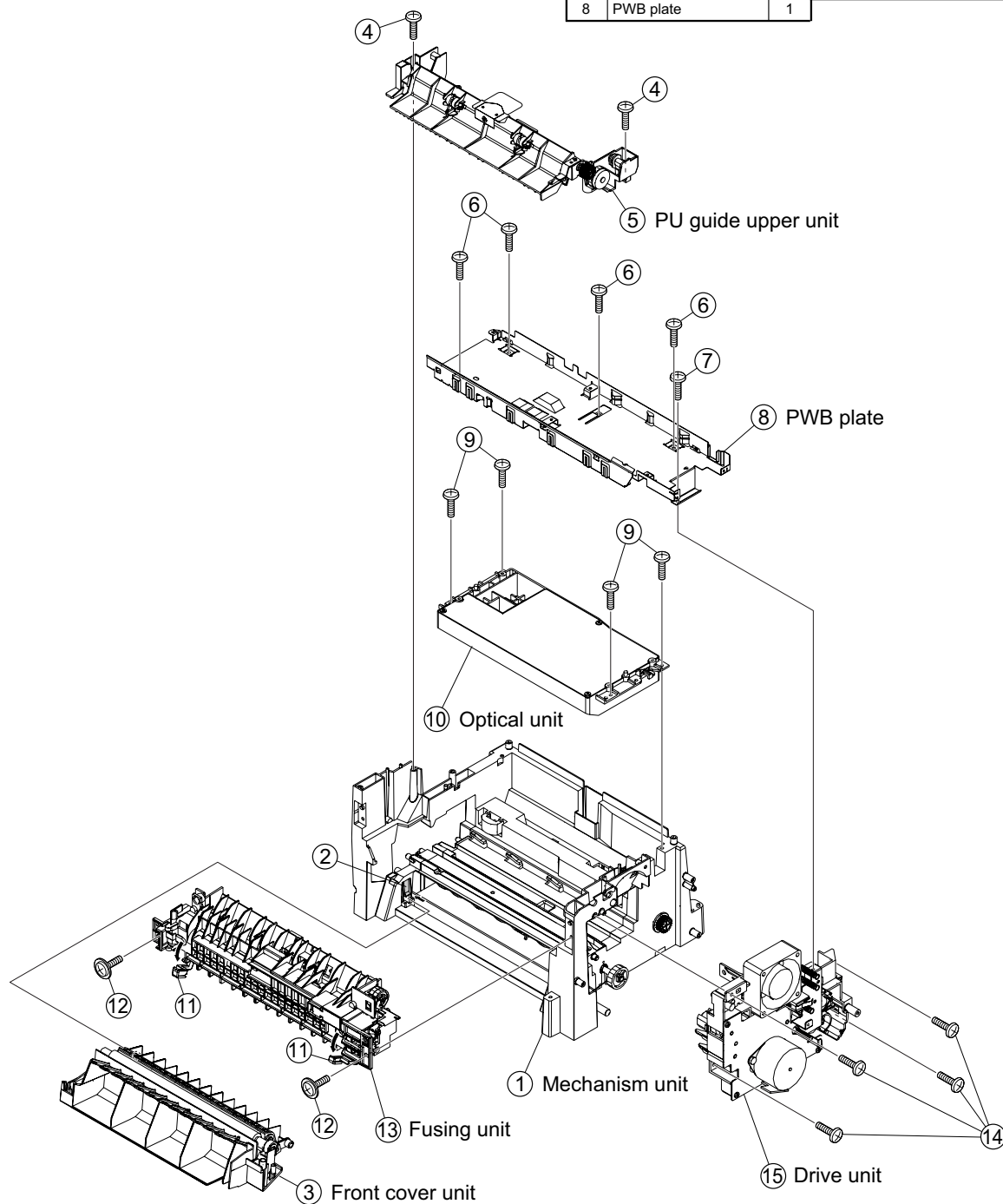


Fig.5

Parts list (Fig. 6)

No.	Part name	Qty
1	Band (100mm)	4

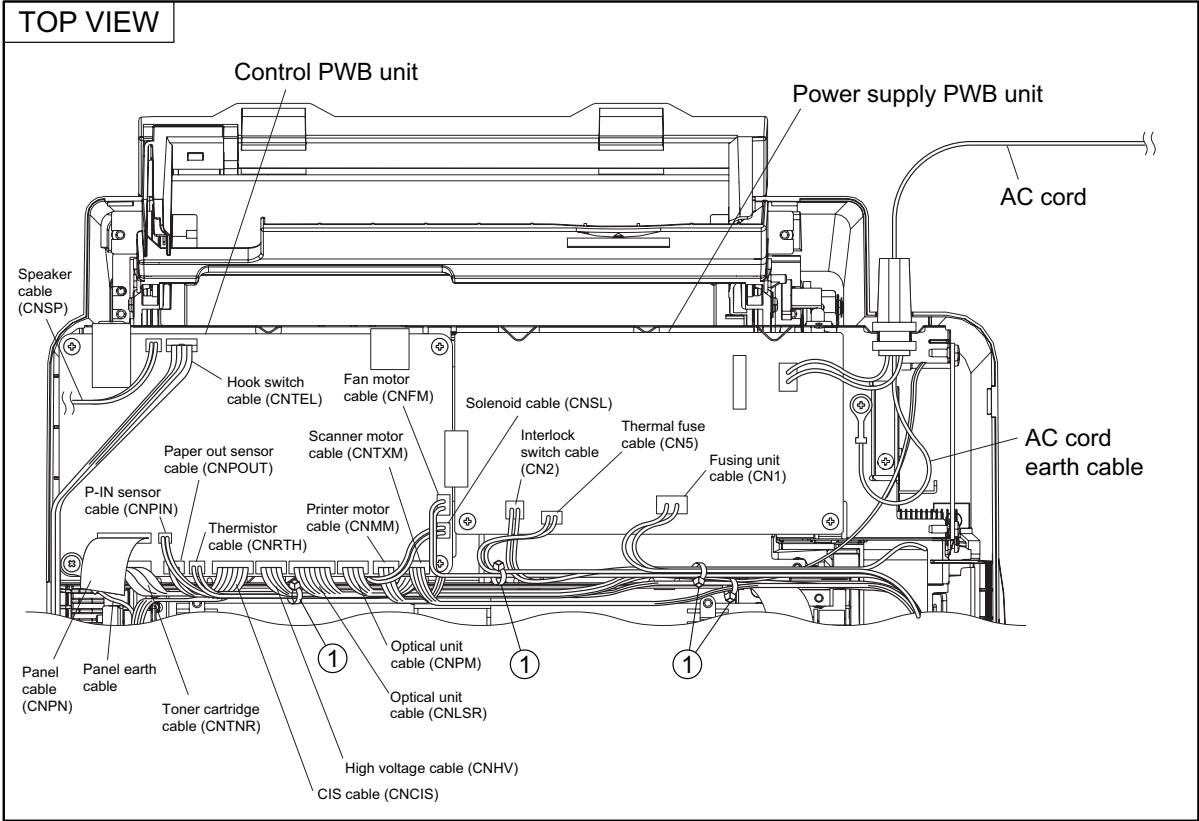
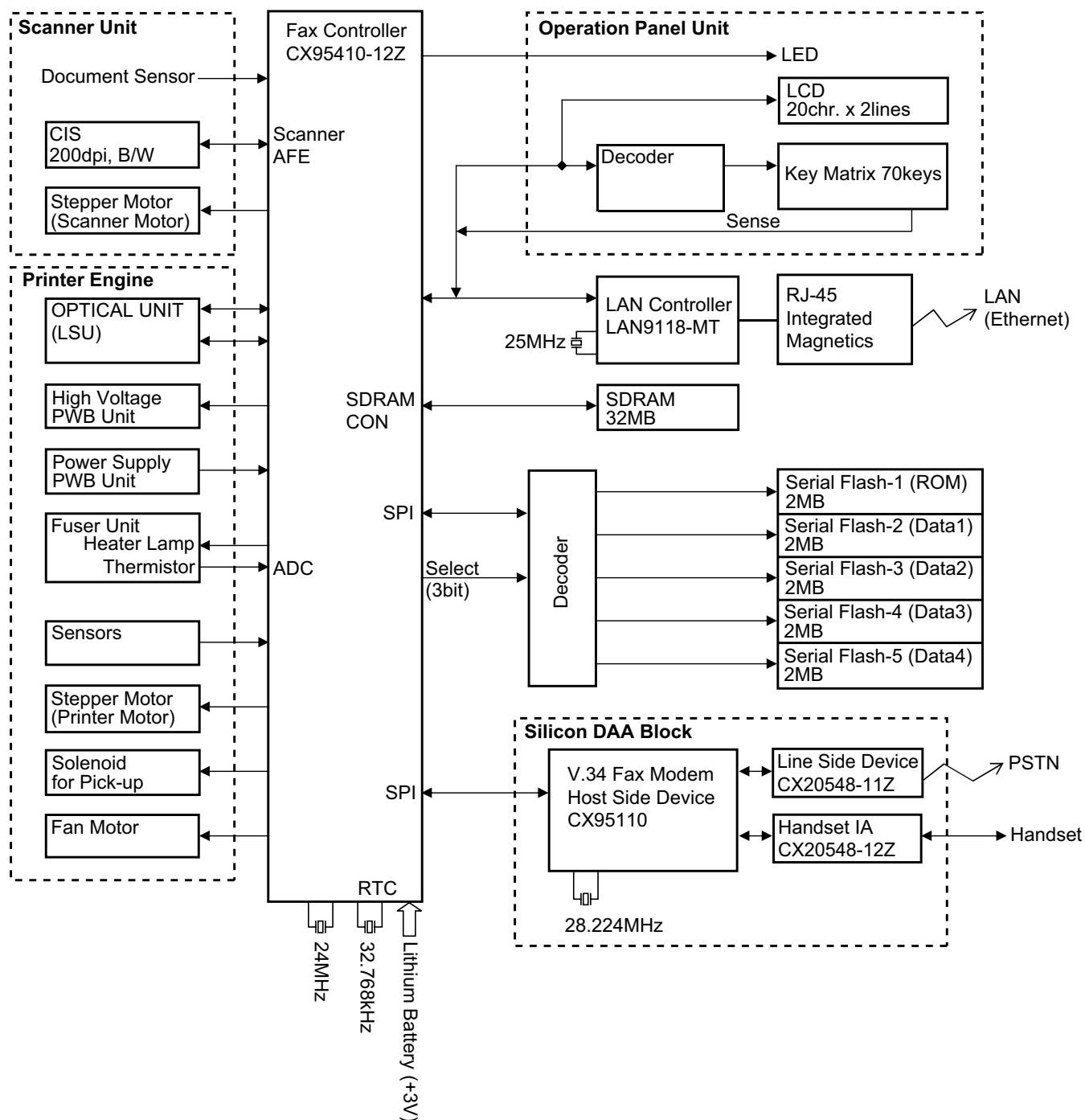


Fig.6

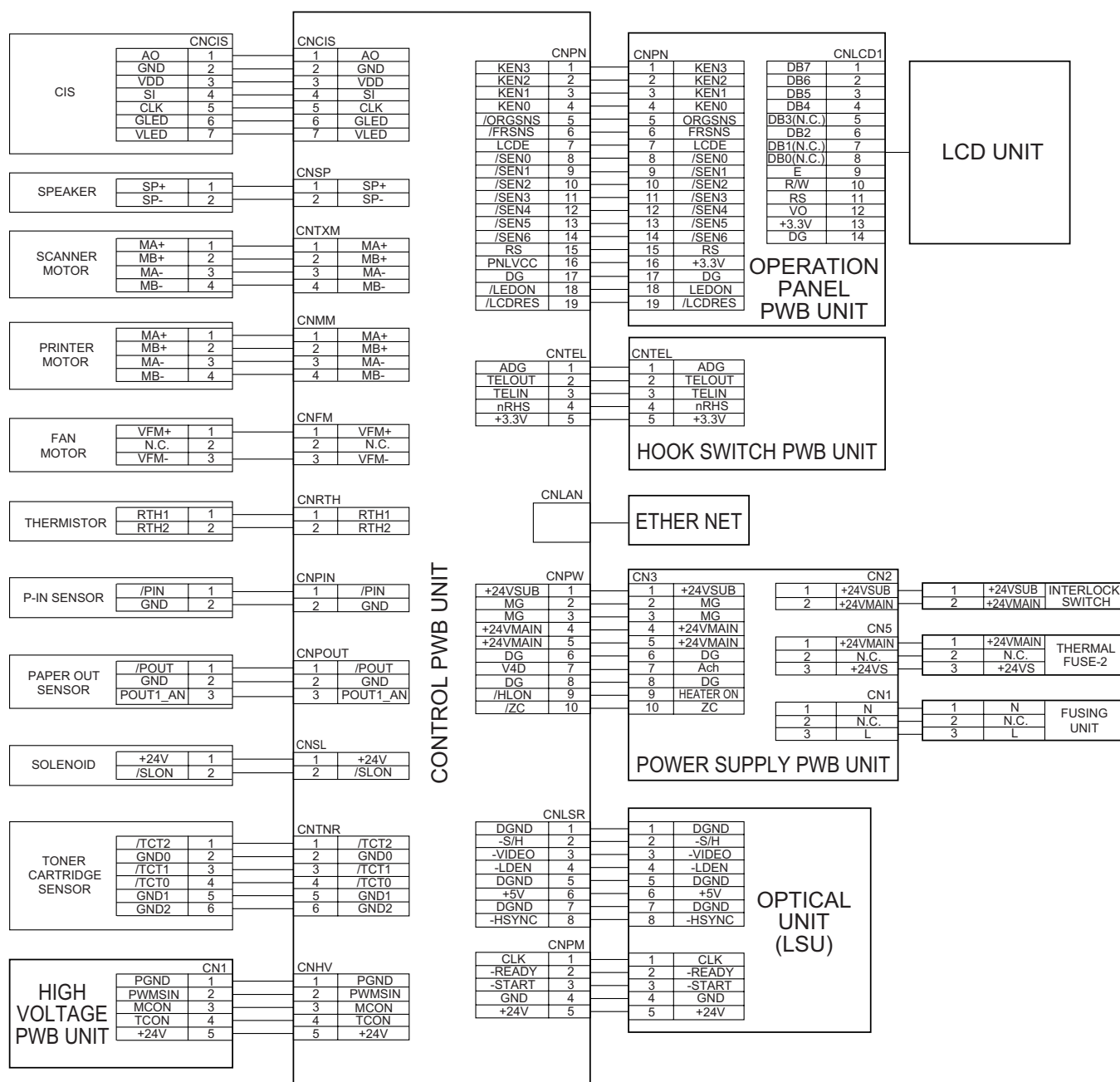
CHAPTER 4. DIADRAMS

[1] Block diagram





[3] Point-to-point diagram



CHAPTER 5. CIRCUIT DESCRIPTION

[1] Circuit description

1. General description

The compact design of the control PWB is obtained by using Fax Engine (CX95410-12Z) in the main control section and high density printing of surface mounting parts. Each PWB is independent according to its function as shown in Fig. 1.

2. PWB configuration

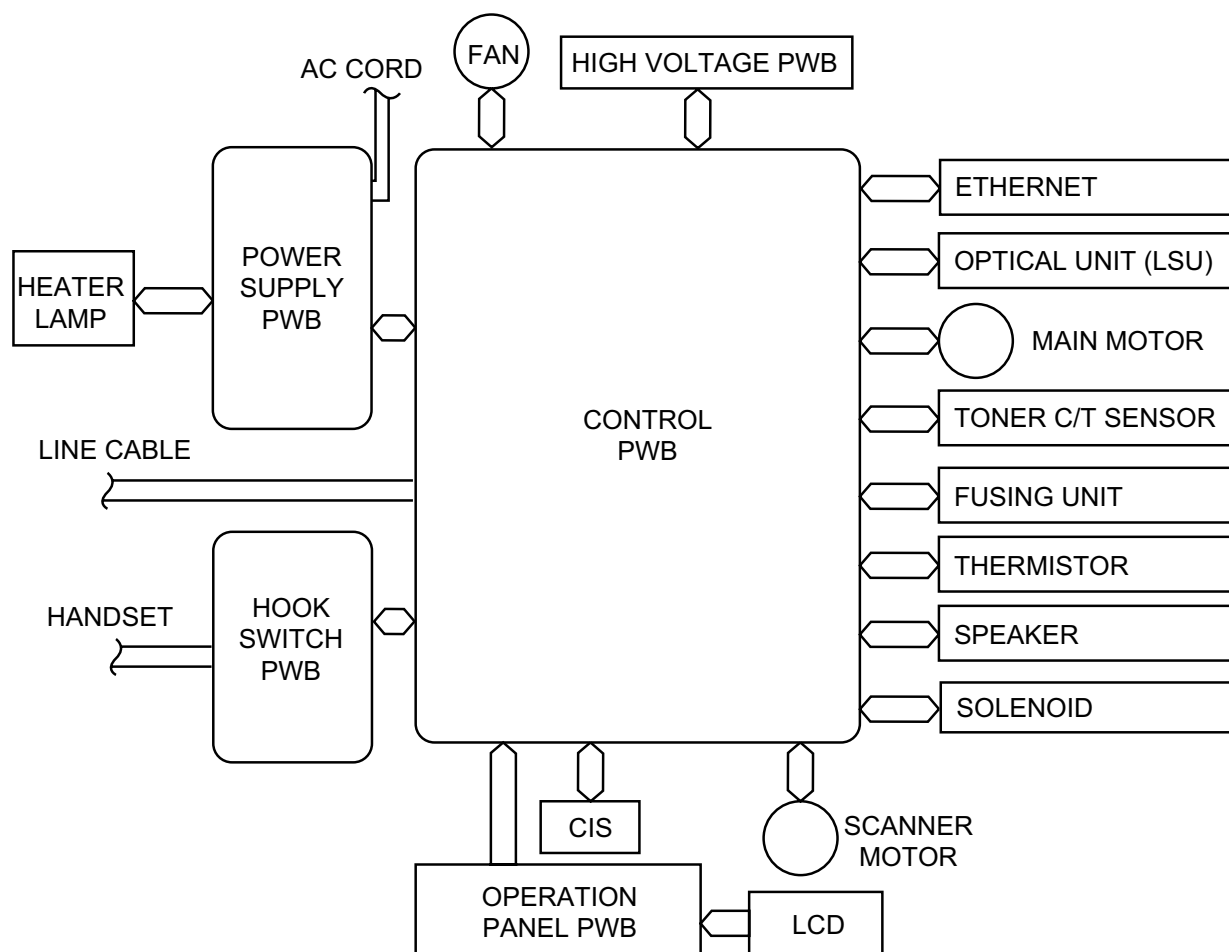


Fig. 1

2.1. Control PWB

The control PWB controls peripheral PWBs, mechanical parts, transmission, and performs overall control of the unit.

2.2. Power supply PWB

This PWB provides voltages of ACH(+4.2V~+5.9V) and +24V to the another PWB.

2.3. Panel PWB

The panel PWB allows input of the operation keys.

2.4. High voltage PWB

This PWB provides the high voltage to printer process units.

2.5. LCD Unit

This PWB controls the LCD display.

[2] Circuit description of control PWB

1. General description

The control PWB is composed of the following blocks.

1.1. Main control block

- 1) Controller block
- 2) Memory block
- 3) Modem block
- 4) Scanner I/F block

1.2. Printer control block

1.3. LAN control block

1.4. Power section

1.5. TEL line interface block

2. Description of each block

2.1. Main control block

Main control block consisting of FAX ENGINE (CX95410-12Z) with 32bit microprocessor core, SDRAM (256Mbit), FLASH (16Mbit), FAX MODEM, etc., controls scanning, images processing, FAX communication, user interface, Ethernet interface etc. and printer controlling.

2.1.1 Controller block

1) CX95410-12Z (IC100): pin-176 QFP (Fax Engine)

1. Feature

- 32-bit CPU provides convenient functional customization
- 1.5 MHz 16-bit ADC with a 3-channel integrated AFE
- Embedded Image Processing DSP
 - Bad pixel correction
 - Dark level and shading correction
 - Linearization
 - Resolution conversion
 - Sharpening
 - Error diffusion
 - Background removal
 - JBIG compression/decompression
- FlexIO supports a variety of system configurations
 - Processing of SCAN video signal and its A/D conversion.
 - CIS control
 - Scanner AFE control
 - Direct thermal, thermal transfer, inkjet and laser print engine direct control
 - Motor control
- ITU-T V.17 facsimile modem function, with T.30, T.4, T.6, T.42 support
- Sleep mode to reduce power consumption
- Real Time Clock with Battery Backup
- High-speed UART with hardware flow control and IrDA support
- High-speed SPI interface for serial flash memory
- 2-channel, 16 kHz delta-sigma modulator
- Optional voice compression/decompression for Digital Telephone Answering Machine (DTAM) application
- Optional full-duplex speakerphone function
- 3.3V single power supply or 3.3V/1.25V dual supply operation

- Compact lead-free (Pb-free) package
- CX95410 Fax Engine Controller: 176-pin LQFP
- CX20548 Codec (IA): 16-pin QFN

2. System Function

- i) **Scan:** Scanner control signals are provided by FlexIO port and dedicated I/O to support common CIS scanners. Analog scan sensor data is digitized through this interface using the integrated ADC.
- ii) **Print:** Printer control signals are provided by a FlexIO port to support common direct thermal, thermal transfer, and inkjet print mechanisms. GPIOs with hardware timers are available for fail-safe thermal operation.
- iii) **Copy:** Simultaneous scan and print operations provide a copy function, which includes support for image scaling (expansion to 400% and reduction to 25%).
- iv) **GPIOs:** General purpose inputs/outputs (GPIOs) are provided that may be used to support common interfaces such as an operator panel. Nine GPIOs are available as inputs that can interrupt the ARC CPU. Three GPIOs are available with hardware timers for fail-safe operations.
- v) **Fax Modem:** The embedded fax modem function provides synchronous 14400 bps half-duplex modem with error detection and DTMF generation/reception. It provides fax transmission/reception from regular PSTN lines, PBX, or private lines, when interfaced to DAA (Data Access Arrangement) circuitry via the Conexant CX20548 Integrated Analog device. The modem can operate at any standard V.17 data speed up to 14400 bps as well as in V.21 and V.23 modes. The modem is designed for use in Group 3 facsimile machines. It satisfies the requirements specified in ITU-T recommendations V.17, V.29, V.27 ter and V.21 Channel 2, and meets the signaling requirements of T.30. It also performs HDLC framing according to T.30 at all speeds.

Pin No.	Pad No.	Side	Pin Signal Name	Pad Signal Name	Pad Type	Pad Cell	Def. I/O	Drv. Str. (def.)	Hys	PU / PD	Description
1	1	L	PWRDWNn	pwrdownn	I	pcb00rtc	I		H		Battery Power Down Indication
2	2	L	BATRSTn	bat_rstn	I	pcb00rtc	I		H		Battery Reset
3	3	L	PLL_VSS	pllvs	GND	pvsnnn					PLL Ground
4	4	L	PLL_VDD	pllvsd	PWR	pvdnnn					1.25V PLL Power
5	5	L	XIN/EXTCLK	xin	I	plx43	I				Crystal/Oscillator Input (10-60 MHz)
6	6	L	XOUT	xout	O	plx43	O				Crystal Output
7	7	L	JTAG_CPU_TCK	jtag_tck	I	plbgp	I			PU	ARC JTAG clock
8	8	L	JTAG_CPU_TDI	jtag_tdi	I	plbgp	I			PU	ARC JTAG data in.
9	9	L	JTAG_CPU_TDO	jtag_tdo	O	plbgp	O	5			ARC JTAG data out
10	10	L	JTAG_CPU_TMS	jtag_tms	I	plbgp	I			PU	ARC JTAG test mode
11	11	L	RESETn	resetrn	B	plbgp	I	5	H	PU	Reset (active low)
12	12	L	TEST_MODE/RCOSC	test_mode/rcosc	I	pldosc24	I				Test Mode/Low Power Oscillator for HSSD (24 MHz)
13	13	L	GPIO[0]	gpio[0]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
14	14	L	GPIO[1]	gpio[1]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
15	15	L	GPIO[2]	gpio[2]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
16	16	L	VDD	vdd	PWR	pvdcn					1.25V Core Power
17	17	L	VSS	vss	GND	pvsenn					Core Ground
18	19	L	VDDO	vddo	PWR	pvdnp					3.3V Power
19	20	L	GPIO[3]	gpio[3]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
20	21	L	GPIO[4]	gpio[4]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
21	22	L	GPIO[5]	gpio[5]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
22	23	L	GPIO[6]	gpio[6]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
23	24	L	GPIO[7]	gpio[7]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
24	25	L	VDD	vdd	PWR	pvdcn					1.25V Core Power
25	26	L	VSS	vss	GND	pvsenn					Core Ground
26	27	L	GPIO[8]	gpio[8]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
27	28	L	GPIO[9]	gpio[9]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
28	29	L	GPIO[10]	gpio[10]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
29	30	L	GPIO[11]	gpio[11]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
30	31	L	GPIO[12]	gpio[12]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
31	32	L	VDD	vdd	PWR	pvdcn					1.25V Core Power
32	33	L	VSS	vss	GND	pvsenn					Core Ground
33	35	L	VDDO	vddo	PWR	pvdnp					3.3V Power
34	36	L	GPIO[13]	gpio[13]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
35	37	L	GPIO[14]	gpio[14]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
36	38	L	GPIO[15]	gpio[15]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
37	39	L	GPIO[16]	gpio[16]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
38	40	L	GPIO[17]	gpio[17]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
39	41	L	ADC_VSS	dvss	GND	pvsnnn					ADC Digital Core Ground
40	43	L	MADC_IN[0]	afe_madcin0	I	pcb00w	I				Monitor ADC Input 0
41	44	L	MADC_IN[1]	afe_madcin1	I	pcb00w	I				Monitor ADC Input 1
42	45	L	MADC_IN[2]	afe_madcin2	I	pcb00w	I				Monitor ADC Input 2
43	46	L	MADC_IN[3]	afe_madcin3	I	pcb00w	I				Monitor ADC Input 3
44	47	L	ADC_VDDO	avddh	PWR	pvdnnn					3.3V Analog Power
45	49	B	ADC_VREF	afe_vref		pvdnnn	B				Voltage Reference
46	50	B	ADC_RBIA	afe_rbias		pvdnnn	B				Reference Bias
47	51	B	ADC_IN	afe_sadcin	I	pdb00w	I				Scanner ADC Input
48	52	B	VREG_CTRL	vctr12	O	pcb00w	O				Voltage Regulator control
49	53	B	VREG_ENABLE	vreg_en	I	pcd10u2	I				Voltage Regulator Enable
50	54	B	GPIO[18]	gpio[18]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
51	55	B	GPIO[19]	gpio[19]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
52	56	B	GPIO[20]	gpio[20]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
53	57	B	GPIO[21]	gpio[21]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
54	58	B	GPIO[22]	gpio[22]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O

CX95410-12Z (IC100) Terminal Description

Pin No.	Pad No.	Side	Pin Signal Name	Pad Signal Name	Pad Type	Pad Cell	Def. I/O	Drv. Str. (def.)	Hys	PU / PD	Description
55	59	B	GPIO[23]	gpio[23]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
56	60	B	GPIO[24]	gpio[24]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
57	62	B	VDDO	vddo	PWR	pvdnp0					3.3V Power
58	63	B	VSS	vsso	GND	pvsnno					I/O Ground
59	66	B	VDD	vdd	PWR	pvdcn0					1.25V Core Power
60	68	B	GPIO[25]	gpio[25]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
61	69	B	GPIO[26]	gpio[26]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
62	70	B	GPIO[27]	gpio[27]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
63	71	B	GPIO[28]	gpio[28]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
64	72	B	GPIO[29]	gpio[29]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
65	73	B	GPIO[30]	gpio[30]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
66	74	B	GPIO[31]	gpio[31]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
67	75	B	GPIO[32]	gpio[32]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
68	76	B	VDD	vdd	PWR	pvdcn0					1.25V Core Power
69	77	B	VSS	vss	GND	pvsenn					Core Ground
70	78	B	GPIO[33]	gpio[33]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
71	79	B	GPIO[34]	gpio[34]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
72	80	B	GPIO[35]	gpio[35]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
73	81	B	GPIO[36]	gpio[36]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
74	82	B	GPIO[37]	gpio[37]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
75	83	B	GPIO[38]	gpio[38]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
76	85	B	VDDO	vddo	PWR	pvdnp0					3.3V Power
77	86	B	VSS	vsso	GND	pvsenn					I/O Ground
78	87	B	VSS	vss	GND	pvsenns					Core Ground
79	88	B	VDD	vdd	PWR	pvdcn0					1.25V Core Power
80	89	B	GPIO[39]	gpio[39]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
81	90	B	GPIO[40]	gpio[40]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
82	91	B	GPIO[41]	gpio[41]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
83	92	B	GPIO[42]	gpio[42]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
84	93	B	GPIO[43]	gpio[43]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
85	94	B	GPIO[44]	gpio[44]	B	plb99n8	I	PGM, 5	PGM		General Purpose I/O / DIBn
86	95	B	GPIO[45]	gpio[45]	B	plb99n8	I	PGM, 5	PGM		General Purpose I/O / DIBp
87	96	B	VDDO	vddo	PWR	pvdnp0					3.3V Power
88	97	B	VSS	vsso	GND	pvsenn_ vddo2core					I/O Ground
89	98	R	GPIO[46]	gpio[46]	B	plb99n8	I	PGM, 5	PGM		General Purpose I/O / DIBn
90	99	R	GPIO[47]	gpio[47]	B	plb99n8	I	PGM, 5	PGM		General Purpose I/O / DIBp
91	100	R	GPIO[48]	gpio[48]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
92	101	R	GPIO[49]	gpio[49]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
93	102	R	GPIO[50]	gpio[50]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
94	103	R	GPIO[51]	gpio[51]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
95	104	R	GPIO[52]	gpio[52]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
96	105	R	VDDO	vddo	PWR	pvdnp0					3.3V Power
97	106	R	VSS	vsso	GND	pvsenn					I/O Ground
98	108	R	VDD	vdd	PWR	pvdcn0					1.25V Core Power
99	109	R	GPIO[53]	gpio[53]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
100	110	R	GPIO[54]	gpio[54]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
101	111	R	GPIO[55]	gpio[55]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
102	112	R	GPIO[56]	gpio[56]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
103	113	R	GPIO[57]	gpio[57]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
104	114	R	GPIO[58]	gpio[58]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
105	115	R	GPIO[59]	gpio[59]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
106	116	R	GPIO[60]	gpio[60]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
107	117	R	GPIO[61]	gpio[61]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
108	118	R	GPIO[62]	gpio[62]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
109	119	R	GPIO[63]	gpio[63]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
110	120	R	GPIO[64]	gpio[64]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
111	121	R	GPIO[65]	gpio[65]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O

Pin No.	Pad No.	Side	Pin Signal Name	Pad Signal Name	Pad Type	Pad Cell	Def. I/O	Drv. Str. (def.)	Hys	PU / PD	Description
112	122	R	VDDO	vddo	PWR	pvdnp0					3.3V Power
113	123	R	VSS	vsso	GND	pvsnn0					I/O Ground
114	125	R	VDD	vdd	PWR	pvdcn0					1.25V Core Power
115	126	R	GPIO[66]	gpio[66]	B	plbgp	I	PGM, 3.5	PGM	PGM	General Purpose I/O
116	127	R	GPIO[67]	gpio[67]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
117	128	R	GPIO[68]	gpio[68]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
118	129	R	GPIO[69]	gpio[69]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
119	130	R	GPIO[70]	gpio[70]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
120	131	R	GPIO[71]	gpio[71]	B	plbgp	I	PGM, 3.5	PGM		General Purpose I/O
121	132	R	DQ[0]	dq[0]	B	plb03	I	8			SDRAM Data
122	133	R	DQ[1]	dq[1]	B	plb03	I	8			SDRAM Data
123	134	R	DQ[2]	dq[2]	B	plb03	I	8			SDRAM Data
124	135	R	DQ[3]	dq[3]	B	plb03	I	8			SDRAM Data
125	137	R	VDDO	vddo	PWR	pvdnp0					3.3V Power
126	138	R	VSS	vsso	GND	pvsnn0					I/O Ground
127	140	R	VDD	vdd	PWR	pvdcn0					1.25V Core Power
128	141	R	DQ[4]	dq[4]	B	plb03	I	8			SDRAM Data
129	142	R	DQ[5]	dq[5]	B	plb03	I	8			SDRAM Data
130	143	R	DQ[6]	dq[6]	B	plb03	I	8			SDRAM Data
131	144	R	DQ[7]	dq[7]	B	plb03	I	8			SDRAM Data
132	145	R	DQ[15]	dq[15]	B	plb03	I	8			SDRAM Data
133	146	T	DQ[14]	dq[14]	B	plb03	I	8			SDRAM Data
134	147	T	DQ[13]	dq[13]	B	plb03	I	8			SDRAM Data
135	148	T	DQ[12]	dq[12]	B	plb03	I	8			SDRAM Data
136	149	T	DQ[11]	dq[11]	B	plb03	I	8			SDRAM Data
137	150	T	DQ[10]	dq[10]	B	plb03	I	8			SDRAM Data
138	151	T	VDDO	vddo	PWR	pvdnp0					3.3V Power
139	152	T	VSS	vsso	GND	pvsnn0					I/O Ground
140	154	T	VDD	vdd	PWR	pvdcn0					1.25V Core Power
141	155	T	DQ[9]	dq[9]	B	plb03	I	8			SDRAM Data
142	156	T	DQ[8]	dq[8]	B	plb03	I	8			SDRAM Data
143	157	T	DQM[1]	dqm[1]	O	plb03	O	8			SDRAM Data Mask
144	158	T	DQM[0]	dqm[0]	O	plb03	O	8			SDRAM Data Mask
145	159	T	SDRAM_CLK	sdram_clk	O	plb03	O	8			SDRAM Clock
146	160	T	VDD	vdd	PWR	pvdcn0					1.25V Core Power
147	161	T	VSS	vss	GND	pvsenn					Core Ground
148	162	T	CKE	cke	O	plb03	O	8			SDRAM Clock Enable
149	163	T	WEn	wen	O	plb03	O	8			SDRAM Write Enable
150	164	T	CASn	casn	O	plb03	O	8			SDRAM Column Address Select
151	165	T	RASn	rasn	O	plb03	O	8			SDRAM Row Address Select
152	166	T	BA[0]	ba[0]	O	plb03	O	8			SDRAM Bank Active
153	167	T	BA[1]	ba[1]	O	plb03	O	8			SDRAM Bank Active
154	168	T	VDD	vdd	PWR	pvdcn0					1.25V Core Power
155	169	T	VSS	vss	GND	pvsenn					Core Ground
156	171	T	VDDO	vddo	PWR	pvdnp0					3.3V Power
157	172	T	ADDR[0]	m_addr[0]	O	plb03	O	8			SDRAM Address
158	173	T	ADDR[1]	m_addr[1]	O	plb03	O	8			SDRAM Address
159	174	T	ADDR[2]	m_addr[2]	O	plb03	O	8			SDRAM Address
160	175	T	ADDR[3]	m_addr[3]	O	plb03	O	8			SDRAM Address
161	176	T	ADDR[12]	m_addr[12]	O	plb03	O	8			SDRAM Address
162	177	T	ADDR[11]	m_addr[11]	O	plb03	O	8			SDRAM Address
163	178	T	ADDR[10]	m_addr[10]	O	plb03	O	8			SDRAM Address
164	179	T	VDD	vdd	PWR	pvdcn0					1.25V Core Power
165	180	T	VSS	vss	GND	pvsenn					Core Ground
166	182	T	VDDO	vddo	PWR	pvdnp0					3.3V Power
167	184	T	ADDR[9]	m_addr[9]	O	plb03	O	8			SDRAM Address
168	185	T	ADDR[8]	m_addr[8]	O	plb03	O	8			SDRAM Address

Pin No.	Pad No.	Side	Pin Signal Name	Pad Signal Name	Pad Type	Pad Cell	Def. I/O	Drv. Str. (def.)	Hys	PU / PD	Description
169	186	T	ADDR[7]	m_addr[7]	O	plb03	O	8			SDRAM Address
170	187	T	ADDR[6]	m_addr[6]	O	plb03	O	8			SDRAM Address
171	188	T	ADDR[5]	m_addr[5]	O	plb03	O	8			SDRAM Address
172	189	T	ADDR[4]	m_addr[4]	O	plb03	O	8			SDRAM Address
173	190	T	RTC_VDDO	rtcvddo	PWR	pcb00rtc					3.3V Battery Power
174	191	T	RTC_VSS	rtcvss	GND	pvsnnn					Battery Ground
175	192	T	RTC_XIN	rtc_xin	I	pcb00rtc	I				32 kHz Crystal/Oscillator input
176	193	T	RTC_XOUT	rtc_xout	O	pcb00rtc	O				32 kHz Crystal output

2.1.2 Memory block

1) SST25VF016B (IC200): pin-8 SOIC (FLASH MEMORY)

16Mbit FLASH Memory.

Firmware for Fax Engine is stored in this device. All of the entry data, user setting and so on are also stored.

2) EDS2516AFTA-75-E (IC202): pin-54 TSOP (SDRAM)

256Mbit (4M x 16bit x 4bank) Synchronous DRAM.

On power on sequence, the program stored in FLASH memory (IC200) is loaded into this device. Then, this device is used as a program execution memory. It is also used as various work memories and communication buffer etc.

3) SST25VF016B (IC201, IC203, IC204, IC206): pin-8 SOIC (FLASH MEMORY)

4 pieces of Flash memory are stored the image data of Fax sending and receiving. Each device has 16Mbit of capacitor.

2.1.3 MODEM block

1) MODEM

The block is mainly composed of the G3 FAX modem CX95110 (IC1000), and is provided with the following modem function.

1) G3 FAX modem

The modem satisfies the requirements specified in ITU-T Recommendations V.17, V.29, V.27 ter, and V.21, and meets the binary signaling requirements of T.30. Internal HDLC support eliminates the need for an external serial input/output (SIO) device in the DTE for products incorporating error detection and T.30 protocol. The modem can perform HDLC framing per T.30 at all data speeds. CRC generation/checking along with zero insertion/deletion enhances SDLC/HDLC frame operations. Two FSK (V.21 Channel 1 and V.21 Channel 2) flag pattern detectors facilitate FSK detection during high-speed reception. The modem features a programmable DTMF transmitter/receiver and three programmable tone detectors.

2) External Handset Support (Optional)

The modem can also provide access to the telephone line from an external handset, when connected via a Conexant CX20548 Line Side Device.

3) SmartDAA

The SmartDAA system-powered DAA operates reliably without drawing power from the line, unlike line-powered DAAs that operate poorly when line current is insufficient due to long lines or poor line conditions. Enhanced features such as monitoring of local extension status without going off-hook are also supported. Incorporating Conexant's proprietary Digital Isolation Barrier (DIB) design and other innovative DAA features such as Digital PBX line protection and status reporting, the SmartDAA architecture simplifies application design, minimizes layout area, and reduces component cost.

4) V.34 Half-Duplex Mode (SSF336)

The SSF336 modem satisfies the requirements specified in ITU-T Recommendation V.34 half-duplex and meets the binary signaling requirements of V.8 and T.30 with Annex F.

5) Features

- 2-wire half-duplex fax modem modes with send and receive data rates up to 14,400 bps
 - V.17, V.29, V.27 ter, and V.21 Channel 2
 - Short train option in V.17 and V.27 ter
- HDLC support at all speeds
 - Flag generation, 0-bit stuffing, ITU CRC-16 or CRC-32 calculation and generation
 - Flag detection, 0-bit deletion, ITU CRC-16 or CRC-32 checksum error detection
 - FSK flag pattern detection during high-speed receiving
- Tone modes and features
 - Programmable single or dual tone generation
 - DTMF receiver
 - Tone detection with three programmable tone detectors
- Auto-dial and auto-answer control
- Receive dynamic range:
 - -3 dBm to -43 dBm for V.17, V.29, V.27 ter and V.21 Channel 2
- Caller ID (V.23, 1200 bps Rx) Demodulation
- ADPCM Voice Mode (Conexant proprietary)
- Programmable RLSD turn-on and turn-off thresholds
- Programmable transmit level: -4 to -15 dBm
- Digital speaker output to monitor received signal
- Two 16-byte FIFO data buffers for burst data transfer with extension up to 255 bytes
- V.21 Channel 1 Flag detect
- V.21 Channel 2 Flag detect
- Support for external handset (voice conversation)
 - Requires use of CX20548 LSD
- +3.3 V only operation
- 32-pin QFN package (HSD)
- Typical power consumption
 - Normal mode: 264 mW
 - Sleep mode: 59.4 mW
 - Deep Sleep mode: 16.5 mW
- PRAM download capability

FO-IS125N

6) Distinguishing Features (SSF336)

- 2-wire V.34 half-duplex fax modem mode with send and receive data rates up to 33,600 bps
- Automatic Rate Adaptation (ARA) in V.34 half-duplex
- PSTN session starting
 - V.8 and V.8bis signaling
- Receive dynamic range: -9 dBm to -43 dBm for V.34 half-duplex

7) SmartDAA Features

- Minimum support component count and cost
- Eliminates costly line transformers, relays, and opto-isolators
- Enables single, worldwide board configurations
- Digital PBX line protection

- System side powered DAA operates under poor line current supply conditions
- Wake-on-ring
- Ring detection
- Line polarity reversal detection
- Line current loss detection
- Pulse dialing
- Line-in-use detection—detects while on-hook
- Extension pick-up detection—detects while off-hook
- Remote hang-up detect—for efficient call termination
- Meets world-wide DC V-I Masks requirements

8) Configurations, Signaling Rates, and Data Rates

Configuration	Modulation	Carrier Frequency (Hz) \pm 0.01%	Data Rate (bps) \pm 0.01%	Symbol Rate (Symbols/Sec.)	Bits/Symbol Data	Bits/Symbol TCM	Constellation Points
V. 34 33600 TCM	TCM	Note 2	33600	3429 only	Note 2	Note 2	Note 2
V. 34 31200 TCM	TCM	Note 2	31200	3200 min	Note 2	Note 2	Note 2
V. 34 28800 TCM	TCM	Note 2	28800	3000 min	Note 2	Note 2	Note 2
V. 34 26400 TCM	TCM	Note 2	26400	2800 min	Note 2	Note 2	Note 2
V. 34 24000 TCM	TCM	Note 2	24000	2800 min	Note 2	Note 2	Note 2
V. 34 21600 TCM	TCM	Note 2	21600	2400 min	Note 2	Note 2	Note 2
V. 34 19200 TCM	TCM	Note 2	19200	Note 2	Note 2	Note 2	Note 2
V. 34 16800 TCM	TCM	Note 2	16800	Note 2	Note 2	Note 2	Note 2
V. 34 14400 TCM	TCM	Note 2	14400	Note 2	Note 2	Note 2	Note 2
V. 34 12000 TCM	TCM	Note 2	12000	Note 2	Note 2	Note 2	Note 2
V. 34 9600 TCM	TCM	Note 2	9600	Note 2	Note 2	Note 2	Note 2
V. 34 7200 TCM	TCM	Note 2	7200	Note 2	Note 2	Note 2	Note 2
V. 34 4800 TCM	TCM	Note 2	4800	Note 2	Note 2	Note 2	Note 2
V. 34 2400 TCM	TCM	Note 2	2400	2400 only	Note 2	Note 2	Note 2
V. 23 1200/75	FSK	1700/420	1200/75	1200	1	0	—
V. 21	FSK	1080/1750	Up to 300	300	1	0	—
V. 17 14400 TCM	TCM	1800	14400	2400	6	1	128
V. 17 12000 TCM	TCM	1800	12000	2400	5	1	64
V. 17 9600 TCM	TCM	1800	9600	2400	4	1	32
V. 17 7200 TCM	TCM	1800	7200	2400	3	1	16
V. 29 9600	QAM	1700	9600	2400	4	0	16
V. 29 7200	QAM	1700	7200	2400	3	0	8
V. 29 4800	QAM	1700	4800	2400	2	0	4
V. 27 ter 4800	DPSK	1800	4800	1600	3	0	8
V. 27 ter 2400	DPSK	1800	2400	1200	2	0	4
V. 21 Channel 2	FSK	1750	300	300	1	0	—

Notes:

1. Modulation legend:

TCM: Trellis-Coded Modulation

FSK: Frequency Shift Keying

QAM: Quadrature Amplitude Modulation

DPSK: Differential Phase Shift Keying

PCM: Pulse Coded Modulation

2. Adaptive; established during handshake:

Symbol Rate (Baud)

V. 34 Low Carrier Frequency (Hz)

V. 34 High Carrier Frequency (Hz)

2400

1600

1800

2800

1680

1867

3000

1800

2000

3200

1829

1920

3429

1959

1959

9) CX95110 (IC1000) Terminal description

Pin Name	Pin No.	Pin I/O	I/O Type	Signal Description
Crystal/Clock Signals				
XTALI/CLKIN	31	I	OSC	Crystal/Oscillator In. The modem must be connected to an external crystal/oscillator circuit consisting of a 28.224 MHz crystal/oscillator. Label XTALI/CLKIN Crystal XTALI Oscillator CLKIN
XTALO	32	O	OSC	Crystal Out. The modem must be connected to an external crystal circuit consisting of a 28.224 MHz crystal. Do not connect when using an oscillator. Label XTALO/NC Crystal XTALO Oscillator NC

Host Control Signals				
RESETn	10	I	GPH	Reset. RESETn low holds the modem in the reset state. RESETn going high releases the modem from the reset state and initiates normal operation using power turn-on (default) values. If RESETn is asserted during normal operation, RESETn must be held low for at least 3 μ s. During power-on, RESETn must be held low for at least 10 ms after VDDO (+3.3 V) is within operating limits. The modem is ready to be accessed by the host 320 ms after bit 2 of register \$2E is set to a 1.
IRQ	8	O	GP	Interrupt Request. Interrupt generated by modem DSP sources. The polarity is programmable. When it is active low, the signal can be connected with other active low, open-drain IRQ sources to form a single interrupt request in a wire-OR configuration. In that configuration, an external pull-up resistor to +3.3V is required on the line, and should be located near the receiver of IRQ.
CSn	1	I	GPH	Chip Select. The active low CSn input selects and enables the HSD for serial data transfer between the HSD and the host over the SPI interface.

Serial Peripheral Interface (SPI)				
SDI	2	O	GPH	Serial Data Input. Output data from modem to host controller (SPI master).
SDO	3	I	GPH	Serial Data Output. Input data to modem from host controller (SPI master).
SCK	4	I	GPH	Serial Data Clock. SPI input clock.

GPIO Signals				
GPIO0	11	I/O	GPH	General Purpose I/O 0. Hysteresis input with a bus holder.
GPIO1	12	I/O	GPH	General Purpose I/O 1. Hysteresis input with a bus holder.
GPIO2	13	I/O	GPH	General Purpose I/O 2. Hysteresis input with a bus holder.
GPIO3	18	I/O	GPH	General Purpose I/O 3. Hysteresis input with a bus holder.
GPIO4	19	I/O	GPH	General Purpose I/O 4. Hysteresis input with a bus holder.

Ring Indicator Signal				
RIn	9	O	GP	Ring Indicator. The RIn output follows the ringing signal coming out of the DSP's ring qualification block with a low level (0 V) during the ON time, and a high level (+3.3 V) during the OFF time.

Speaker Interface Signals				
SDAA_PWM	22	O	GP	Speaker Output. Analog or digital speaker output signal for line monitoring function. An external speaker driver is needed. If no used, tie to ground through a 75 k Ω resistor.

SmartDAA Interface Signals				
SDAA_RCREF	30	I	-	SSD RC Oscillator Reference. Connect to VDDO through a 240 k Ω resistor.

Pin Name	Pin No.	Pin I/O	I/O Type	Signal Description
Line Interface Signals				
P_DIBn	14	I/O	-	SSD DIB Negative. Provides clock and power to the LSD, and transfers data, control and status information between the SSD and the external LSD through the DIB for connection to the telephone line.
P_DIBp	15	I/O.	-	SSD DIB Positive. Provides clock and power to the LSD, and transfers data, control and status information between the SSD and the external LSD through the DIB for connection to the telephone line.

Handset Interface Signals				
S_DIBn	20	I/O	-	Handset DIB Negative. Transfers data, control and status information between the SSD and the external LSD for connection to an optional handset.
S_DIBp	21	I/O	-	Handset DIB Positive. Transfers data, control and status information between the SSD and the external LSD for connection to an optional handset.

Diagnostic/Config				
EYESYNC	24	O	GPH	Serial Eye Pattern Strobe. EYESYNC is a strobe for loading the D/A converters on an external eye pattern circuit.
EYECLK	25	O	GPH	Serial Eye Pattern Clock. EYECLK is an output clock for use by the serial-to-parallel converters on an external eye pattern circuit.
EYEXY/ SWCFG2	23	I/O	PLB03	Serial Eye Pattern X/Y Output/Software Config Bit 2. EYEXY is a serial output containing two 11-bit diagnostic words (EYEX and EYEX) for display on an oscilloscope X axis (EYEX) and Y axis (EYEX), using an external eye pattern circuit. EYEX is the first word clocked out; EYEX follows. Each word is 8-bits. EYEXY is clocked by the rising edge of EYECLK. This serial digital data must be converted to parallel digital form by a serial-to-parallel converter, and then to analog form by two digital-to-analog (D/A) converters. This pin can also be used as SWCFG2, a configuration input. During reset, the pin is three-stated and the value on this pin is stored in the SWCONFIG register. An external pull-up or pull-down resistor of about 75 kΩ is recommended to set the value.
XCLK/SWCFG1	26	I/O	PLB03	X Clock/Software Config Bit 1. Output clock at 70.56 MHz. It can be turned off at any time by setting bit 1 of register \$2E. During reset, this pin functions the same as SWCFG2.
YCLK/SWCFG0	27	I/O	PLB03	Y Clock/Software Config Bit 0. Output clock at 28.224 MHz. It can be turned off at any time by setting bit 0 of register \$2E. During reset, this pin functions the same as SWCFG2.

Power/GND Pins				
VDD	5, 29	-	-	Supply Voltage for Digital Circuits. +1.2 V from internal regulator. The VDD pins must be decoupled to VSS-VSSO.
VDDO	7, 17	-	-	Supply Voltage for I/O Circuits. Connect to +3.3 V.
VSS-VSSO	6, 16, 28	-	-	Ground for the Digital Circuits and I/O Circuits. Connect to digital ground.
PADDLE	33	-	-	Paddle Ground. The PADDLE, a conductive surface located on the bottom of the package, is connected internally to VSS-VSSO ground.

Note: All pins have neither internal pull-up or pull-down resistors.

2.1.4 Scanner I/F block

1) CIS I/F block

The CIS is controlled by Fax Engine (IC100), and the output video signal from CIS is input into AFE block of Fax Engine (IC100). CIS LED is controlled through LED driving circuit (Q600) by Fax Engine (IC100).

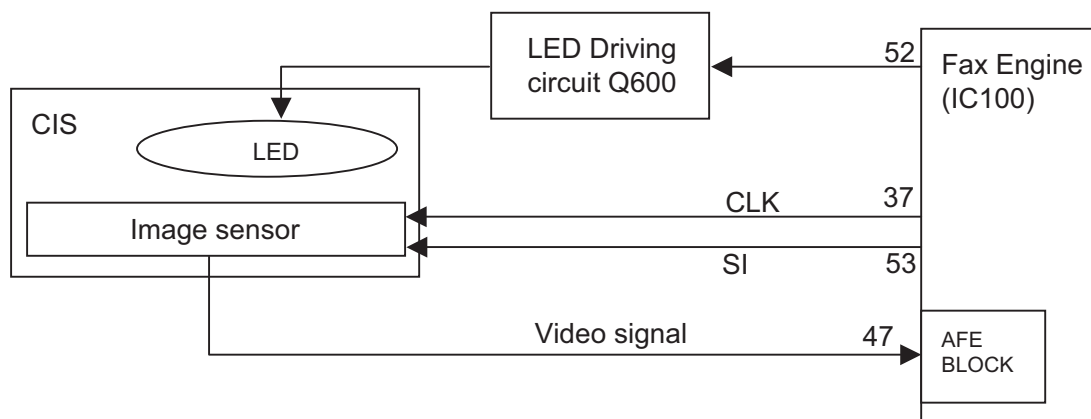


Fig. 2

2) Scanner Motor control

A3967SLBTR-T (IC600): pin-24 (Scanner Motor Driver)

The scanner motor is driven by this Motor Driver which is the constant current motor driver with bipolar, chopper system the rotation speed and its timing of the scanner motor are controlled by Fax Engine (IC100).

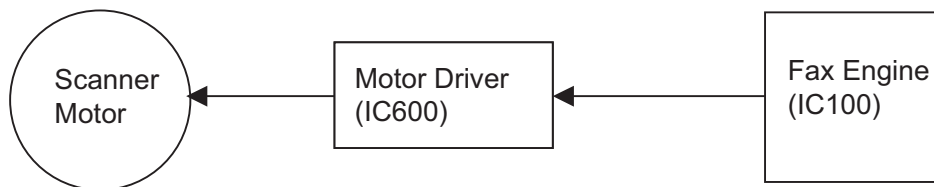


Fig. 3

2.2. Printer control block

Fax Engine (IC100) controls each component of Laser Beam Printer (LBP) as follows.

- 1) Main Motor control
- 2) Pickup Motor control
- 3) Fuser control
- 4) High Voltage Generator control
- 5) Laser Scanning control
- 6) Sensor monitor

2.2.1 Signal connection

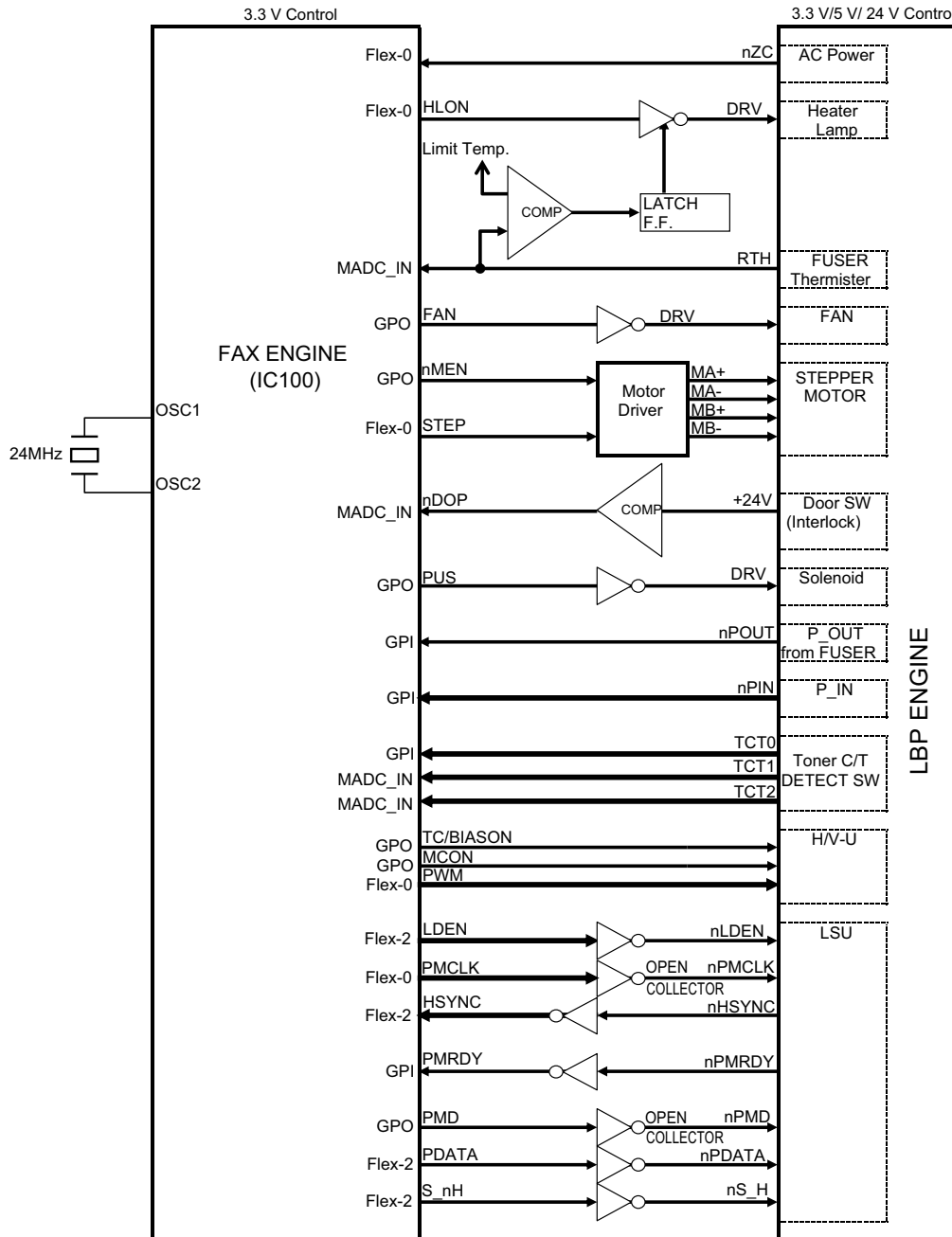


Fig. 4

2.2.2 Signal assignment to the Printer CPU pins

Control unit	Mechanism control CPU			Description
	Signal	I/O	Pin No.	
LSU	PMCLK	O	FlexIO0B[0]	Polygon motor clock
	LDEN	O	FlexIO2A[4]	Laser circuit driving signal
	S_nH	O	FlexIO2A[5]	APC circuit sample signal
	PDATA	O	FlexIO2B[0]	Laser on signal
	HSYNC	I	FlexIO2B[4]	Laser main scanning synchronism signal
	PMD	O	GPIO[03]	Polygon motor driving signal
	PMREADY	I	GPIO[24]	Polygon motor turn synchronism detection
High voltage	MCON	O	GPIO[05]	Charge control
	TC/BSON	O	GPIO[06]	Transfer/DC bias control
	PWM	O	FlexIO0B[1]	Clock for high voltage control clock PWM
Sensor	nPIN	I	GPIO[19]	Main unit paper feed detection (Paper-In)
	nPOUT	I	GPIO[18]	Paper eject detection (Paper-Out/fusing section)
	nDOP	I	GPIO[01]	Door open/close detection (front and right doors)
	TCT0	I	GPIO[23]	Toner cartridge identification
	TCT1	I	MADC_IN[2]	
	TCT2	I	MADC_IN[1]	
Fusing	nHLON	O	FlexIO0B[3]	Heater lamp ON/OFF control
	RTH	I	MADC_IN[0]	Thermistor analog input (temperature detection)
Main motor	nMEN	O	GPIO[04]	Excitation enable
	STEP	O	FlexIO0B[2]	Step clock
Solenoid	PUS	O	GPIO[07]	Solenoid ON/OFF control
Fan	FAN	O	GPIO[00]	Fan ON/OFF control
Power supply	nZC	I	FlexIO0A[2]	AC zero-cross signal input

- 1) Main Motor control: Control the rotation of Main Motor and its mechanism

Main Motor is the stepper motor and drives the whole of the mechanism of LBP. Main Motor is driven in 2-phase excitation by the driver (IC500: A3982SLB). The driver circuit is provided with the fuse (F500) to shut the motor power supply for the safety.

- 2) Pickup Solenoid drive: Drive a solenoid for paper pickup

Pickup Solenoid drives the pickup mechanism of print paper. The driver circuit is provided with the fuse (F501) to shut power supply for the safety. Fax Engine controls the timing to pickup the paper with watching the paper sensor.

- 3) Fuser control: Control the temperature of the fuser unit

The heater lamp is controlled ON/OFF to adjust the temperature of the fusing unit. The heater lamp is driven by the driver (Q900). The temperature of the fusing unit is monitored with the thermistor. The fuser control circuit is provided with the safety circuit to stop to light the heater lamp automatically when the thermistor detection temperature rises over unusual high temperature.

- 4) High Voltage Generator control: Control high voltage supplied to LBP

- Main charger voltage to the drum unit
- Developing bias voltage to the toner unit
- Transfer charger voltage to the transfer roller

The high voltage outputted from High Voltage unit is controlled with PWM and ON/OFF signals ("MCON" and "TCON").

- 5) Laser Scanning control: Control Optical unit (LSU) to expose the OPC drum.

The laser beam scanning light expose the OPC drum corresponding to the print data. The circuit of Optical unit (LSU) is composed with the scanning motor drive block and the laser beam drive block.

- a) The control of the scanning motor drive block

The scanning motor is controlled by the clock of 2659Hz ("PMCLK") and ON/OFF signal ("PMD"). Optical unit (LSU) replies by the ready when the rotation of the motor becomes stable. The initialization of the laser beam control is started after the stable rotation of the scanning motor is confirmed.

- b) The laser beam drive block

The timing of the signals is controlled in accordance with the specifications of Optical unit (LSU). Fax Engine (IC100) outputs the print data ("PDATA") synchronized in the horizontal synchronous signal ("SYNC") from Optical unit (LSU).

- 6) Sensor monitor: Monitor each sensor

Fax Engine controls the timing of the printing action with the following sensor information, and detect the paper jam, the paper empty and the paper size.

- a) P-IN: Detect carriage position of the paper
- b) P-OUT: Detect carriage position of the paper
- c) TCT2~0: Detect the toner cartridge setting

2.2.3 Hardware controlled protection function

Device		Protective action	Circuit description	Purpose	Status to be activated
Heater lamp (fusing device)	1	The heater lamp is forcibly turned off when the temperature of the fusing device (thermistor value) exceeds the upper limit.	The circuit forcibly turns off (resets) the control signal of the heater lamp when the thermistor value reaches 238 ± 6 °C. To turn on the heater lamp again, it is necessary to reset all system or power down once. In other words, once the protective action is performed, the protection is not canceled automatically even if the temperature detected by the thermistor decreases.	Avoiding the abnormally high temperature of the fusing device.	The protection is activated when F/W is out of control, the microcomputer ADC is defective, or other abnormality occurred. Normally, the heater lamp is turned on/off by monitoring the temperature using F/W.
Laser (LSU)	1	When the cover is open, the power supply to the laser system circuits is shut off.	Equipped with a regulator circuit for producing the laser system power (+5 V) supplied to the LSU from +24 V power supply interrupted by the interlock.	Avoiding the exposure to laser beam.	Malfunction due to the digital system circuit failure.
	3	The sampling of S/H signal is disabled unless the VIDEO signal is active (laser on).	Equipped with a circuit for enabling output of the S/H signal when the VIDEO signal is received.	Avoiding abnormally high output of the laser.	When F/W under development is defective or runs out of control, the protection is activated. Normally, each signal is controlled following the sequence by F/W.

A fuse is installed in the following power supply lines: Optical unit (LSU) laser, Main motor, Pickup motor

2.3. LAN control block

LAN Control Block is composed with LAN controller LAN9118-MT(IC800) and integrated magnetics LAN jack.

2.3.1 LAN9118-MT (IC800) Hardware description

General description

The SMSC LAN9118-MT integrated 10/100 MAC/PHY controller is a peripheral chip that performs the function of translating parallel data from a host controller into Ethernet packets. The LAN9118-MT Ethernet MAC/PHY controller is designed and optimized to function in an embedded environment. All communication is performed with programmed I/O transactions using the simple SRAM-like host interface bus.

The diagram shown above, describes a typical system configuration of the LAN9118-MT in a typical embedded environment.

The LAN9118-MT is a general purpose, platform independent, Ethernet controller. The LAN9118-MT consists of four major functional blocks. The four blocks are:

- 10/100 Ethernet PHY
- 10/100 Ethernet MAC
- RX/TX FIFOs
- Host Bus Interface (HBI)

2.3.2 Description of pin functions

PIN NO.	NAME	SYMBOL	BUFFER TYPE	# PINS	DESCRIPTION
21,26,29-33,36-40	Host Data High	D[31:16]	I/O8 (PD)	16	Bi-directional data port. Supports Big/Little Endian Byte ordering. Note that Pull-down's are disabled in 32 bit mode.
43,46,49-53,56-59,62-64	Host Data Low	D[15:0]	I/O8	16	Bi-directional data port. Supports Big/Little Endian Byte ordering.
12-18	Host Address	A[7:1]	IS	7	7-bit Address Port. Used to select Internal CSR's and TX and RX FIFOs.
92	Read Strobe	nRD	IS	1	Active low strobe to indicate a read cycle.
93	Write Strobe	nWR	IS	1	Active low strobe to indicate a write cycle. This signal, qualified with nCS, is also used to wakeup the LAN9118 when it is in a reduced power state.
94	Chip Select	nCS	IS	1	Active low signal used to qualify read and write operations. This signal qualified with nWR is also used to wakeup the LAN9118 when it is in a reduced power state.
72	Interrupt Request	IRQ	O8/OD8	1	Programmable Interrupt request. Programmable polarity, source and buffer types.
71,73,75,84,90,91	Reserved	Reserved		5	No Connect
74	10/100 Selector	SPEED_SEL	I (PU)	1	This signal functions as a configuration input on power-up and is used to select the default Ethernet settings. Upon deassertion of reset, the value of the input is latched. This signal functions as shown in Table 2, "Default Ethernet Settings", below.
76	FIFO Select	FIFO_SEL	IS	1	When driven high all accesses to the LAN9118 are to the RX or TX Data FIFOs. In this mode, the A[7:3] upper address inputs are ignored.

Table 1 Host Bus Interface Signals

DEFAULT ETHERNET SETTINGS			
SPEED_SEL	SPEED	DUPLEX	AUTO NEG.
0	10MBPS	HALF-DUPLEX	DISABLED
1	100MBPS	HALF-DUPLEX	ENABLED

Table 2 Default Ethernet Setting

PIN NO.	NAME	SYMBOL	BUFFER TYPE	NUM PINS	DESCRIPTION
79	TXP	TPO+	AO	1	Twisted Pair Transmit Output, Positive
78	TXN	TPO-	AO	1	Twisted Pair Transmit Output, Negative
83	RXP	TPI+	AI	1	Twisted Pair Receive Input, Positive
82	RXN	TPI-	AI	1	Twisted Pair Receive Input, Negative
87	PHY External Bias Resistor	EXRES1	AI	1	Must be connected to ground through a 12.4K ohm 1% resistor.

Table 3 LAN Interface Signals

PIN NO.	NAME	SYMBOL	BUFFER TYPE	NUM PINS	DESCRIPTION
67	EEPROM Data, GPO3, TX_EN, TX_CLK, D32/nD16	EEDIO/GPO3/TX_EN/TX_CLK (D32/nD16)	I/O8	1	<p>EEPROM Data: This bi-directional pin can be connected to a serial EEPROM DIO. This is optional.</p> <p>General Purpose Output 3: This pin can also function as a general purpose output, or it can be configured to monitor the TX_EN or TX_CLK signals on the internal MII port. When configured as a GPO signal, or as a TX_EN/TX_CLK monitor, the EECS pin is deasserted so as to never unintentionally access the serial EEPROM. This signal cannot function as a general-purpose input.</p> <p>Data Bus Width Select: This signal also functions as a configuration input on power-up and is used to select the host bus data width. Upon deassertion of reset, the value of the input is latched. When high, a 32-bit data bus is utilized. When low, a 16-bit interface is utilized.</p>
68	EEPROM Chip Select	nEECS	O8	1	Serial EEPROM chip select.
69	EEPROM Clock, GPO4 RX_DV, RX_CLK	EECLK/GPO4/RX_DV/RX_CLK	O8	1	<p>EEPROM Clock: Serial EEPROM Clock pin.</p> <p>General Purpose Output 4: This pin can also function as a general-purpose output, or it can be configured to monitor the RX_DV or RX_CLK signals on the internal MII port. When configured as a GPO signal, or as an RX_DV/RX_CLK monitor, the EECS pin is deasserted so as to never unintentionally access the serial EEPROM. This signal cannot function as a general-purpose input.</p>

Table 4 Serial EEPROM Interface Signals

PIN NO.	NAME	SYMBOL	BUFFER TYPE	NUM PINS	DESCRIPTION
6	Crystal 1	XTAL1	lclk	1	External 25MHz Crystal Input. Can also be connected to single-ended TTL oscillator. If this method is implemented, XTAL2 should be left unconnected.
5	Crystal 2	XTAL2	Oclk	1	External 25MHz Crystal output.
95	Reset	nRESET	IS (PU)	1	<p>Active-low reset input. Resets all logic and registers within the LAN9118. This signal is pulled high with a weak internal pull-up resistor. If nRESET is left unconnected, the LAN9118 will rely on its internal power-on reset circuitry.</p> <p>Note: The LAN9118 must always be read at least once after power-up, reset, or upon return from a power-saving state or write operations will not function.</p>
70	Wakeup Indicator	PME	O8/OD8	1	<p>When programmed to do so, is asserted when the LAN9118 detects a wake event and is requesting the system to wake up from the associated sleep state. The polarity and buffer type of this signal is programmable.</p> <p>Note: Detection of a Power Management Event, and assertion of the PME signal will not wakeup the LAN9118. The LAN9118 will only wake up when it detects a host write cycle (assertion of nCS and nWR). Although any write to the LAN9118, regardless of the data written, will wake-up the device when it is in a power-saving mode, it is required that the BYTE_TEST register be used for this purpose.</p>
100,99,98	General Purpose I/O data, nLED1 (Speed Indicator), nLED2 (Link & Activity Indicator), nLED3 (Full-Duplex Indicator).	GPIO[2:0]/LED[3:1]	IS/O12/OD12	3	<p>General Purpose I/O data: These three general-purpose signals are fully programmable as either push-pull output, open-drain output or input by writing the GPIO_CFG configuration register in the CSR's. They are also multiplexed as GP LED connections. GPIO signals are Schmitt-triggered inputs. When configured as LED outputs these signals are open-drain.</p> <p>nLED1 (Speed Indicator). This signal is driven low when the operating speed is 100Mbps, during auto negotiation and when the cable is disconnected. This signal is driven high only during 10Mbps operation.</p> <p>nLED2 (Link & Activity Indicator). This signal is driven low (LED on) when the LAN9118 detects a valid link. This signal is pulsed high (LED off) for 80mS whenever transmit or receive activity is detected. This signal is then driven low again for a minimum of 80mS, after which time it will repeat the process if TX or RX activity is detected. Effectively, LED2 is activated solid for a link. When transmit or receive activity is sensed LED2 will flash as an activity indicator.</p> <p>nLED3 (Full-Duplex Indicator). This signal is driven low when the link is operating in full-duplex mode.</p>

Table 5 System and Power Signals (1/2)

PIN NO.	NAME	SYMBOL	BUFFER TYPE	NUM PINS	DESCRIPTION
10	RBIAS	RBIAS	AI	1	PLL Bias: Connect to an external 12.0K ohm 1.0% resistor to ground. Used for the PLL Bias circuit.
9	Test Pin	ATEST	I	1	This pin must be connected to VDD for normal operation.
2	Internal Regulator Power	VREG	P	1	3.3V input for internal voltage regulator
20,28,35,42,48,55,61,97	+3.3V I/O Power	VDD_IO	P	8	+3.3V I/O logic power supply pins
19,27,34,41,47,54,60,96	I/O Ground	GND_IO	P	8	Ground for I/O pins
81,85,89	+3.3V Analog Power	VDD_A	P	3	+3.3V Analog power supply pins. See Note 1
77,80,86,88	Analog Ground	VSS_A	P	4	Ground for analog circuitry
3,65	Core Voltage Decoupling	VDD_CORE	P	2	1.8 V from internal core regulator. Both pins must be connected together externally and then tied to a 10uF 0.1-Ohm ESR capacitor, in parallel with a 0.01uF capacitor to Ground next to each pin. See Note 1
1,66	Core Ground	GND_CORE	P	2	Ground for internal digital logic
7	PLL Power	VDD_PLL	P	1	1.8V Power from the internal PLL regulator. This external pin must be connected to a 10uF 0.1-Ohm ESR capacitor, in parallel with a 0.01uF capacitor to Ground. See Note 1
4	PLL Ground	VSS_PLL	P	1	GND for the PLL
8	Reference Power	VDD_REF	P	1	Connected to 3.3v power and used as the reference voltage for the internal PLL
11	Reference Ground	VSS_REF	P	1	Ground for internal PLL reference voltage

Note 1 Please refer to the SMSC application note AN 12.5 titled "Designing with the LAN9118 - Getting Started". It is also important to note that this application note applies to the whole SMSC LAN9118 family of Ethernet controllers. However, subtle differences may apply.

Table 5 System and Power Signals (2/2)

2.4. Power section

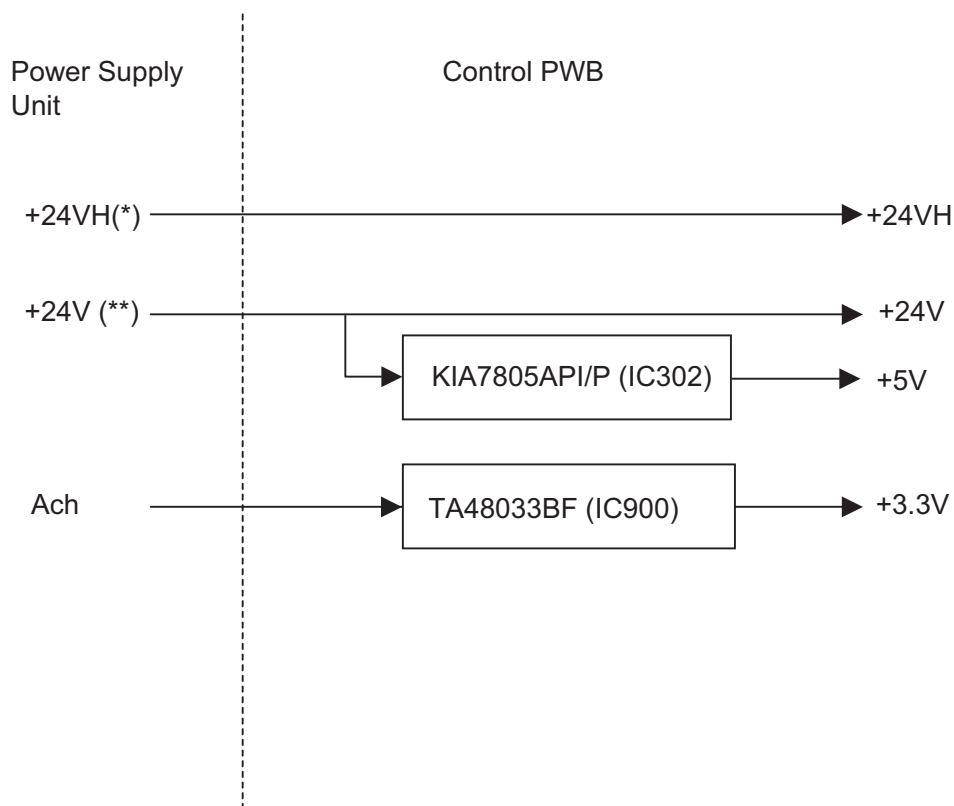
The Control PWB requires multi voltage (+3.3V, +5V, +24V, +24VH).

V4D, +24V and +24VH are supplied from the power supply unit.

+3.3V are generated by the regulator (IC900) on the Control PWB.

INT5V is generated by regulator (IC302) on the Control PWB, is the exclusive use as interlocking power for Optical unit (LSU).

Its structure is as shown below.



(*) Supplied always regardless of door open/close.

(**) Supplied only when door is close.

Fig. 5

2.5. TEL line interface block

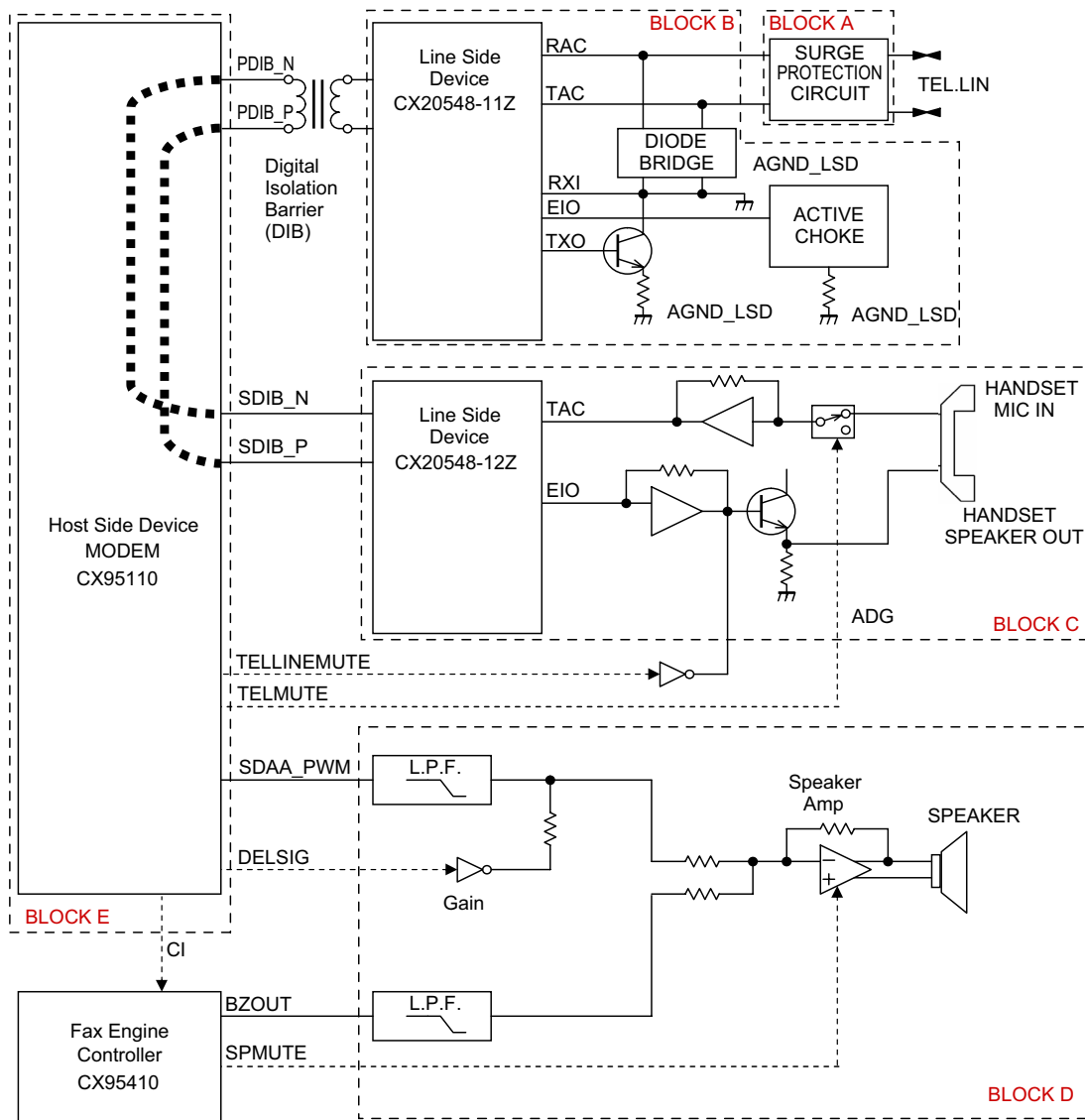


Fig. 6

2.5.1 Circuit description

The TEL line interface circuit is composed of the following 5 blocks.

- 1) Surge protection circuit (BLOCK A)
- 2) TEL line interface circuit (BLOCK B)
- 3) Handset interface circuit (BLOCK C)
- 4) Speaker amplifier circuit (BLOCK D)
- 5) Modem circuit (BLOCK E)

2.5.2 Block description

1) Surge Protection circuit (BLOCK A)

This circuit protects the circuit from the surge voltage occurring on the telephone line.

- The AR1101 protects the circuit from the 300V or higher line surge voltages.
- The AR1102 and AR1103 protect the circuit from the 500V or higher vertical surge voltage.
- The VA1100 protect the Q1100, Q1101, Q1102 and Q1103 from the 330V or higher line surge voltage.

2) TEL line interface circuit (BLOCK B)

It has the following functions.

- On-hook status detection
- Dial pulse generation
- Hybrid circuit

IC1100 (CX20548-11Z) controls these functions

3) Handset interface circuit (BLOCK C)

IC1200 (CX20548-12Z) controls Telephone Speech circuit.

TEL LINE MUTE: H: Handset speaker muting
L: Muting cancel
TEL MUTE: H: Handset mic muting
L: Muting cancel

4) Speaker amplifier circuit (BLOCK D)

The amplifier (IC1001) of TEL line monitor and the Buzzer sound is done.

SPMUTE: H: Speaker amplifier muting
L: Muting cancel

5) Modem circuit (BLOCK E)

The control of the FAX communication by IC1000 (CX95110).

The detection of CI signal, and the line monitor signal is mode.

(Example: Fax signal send)

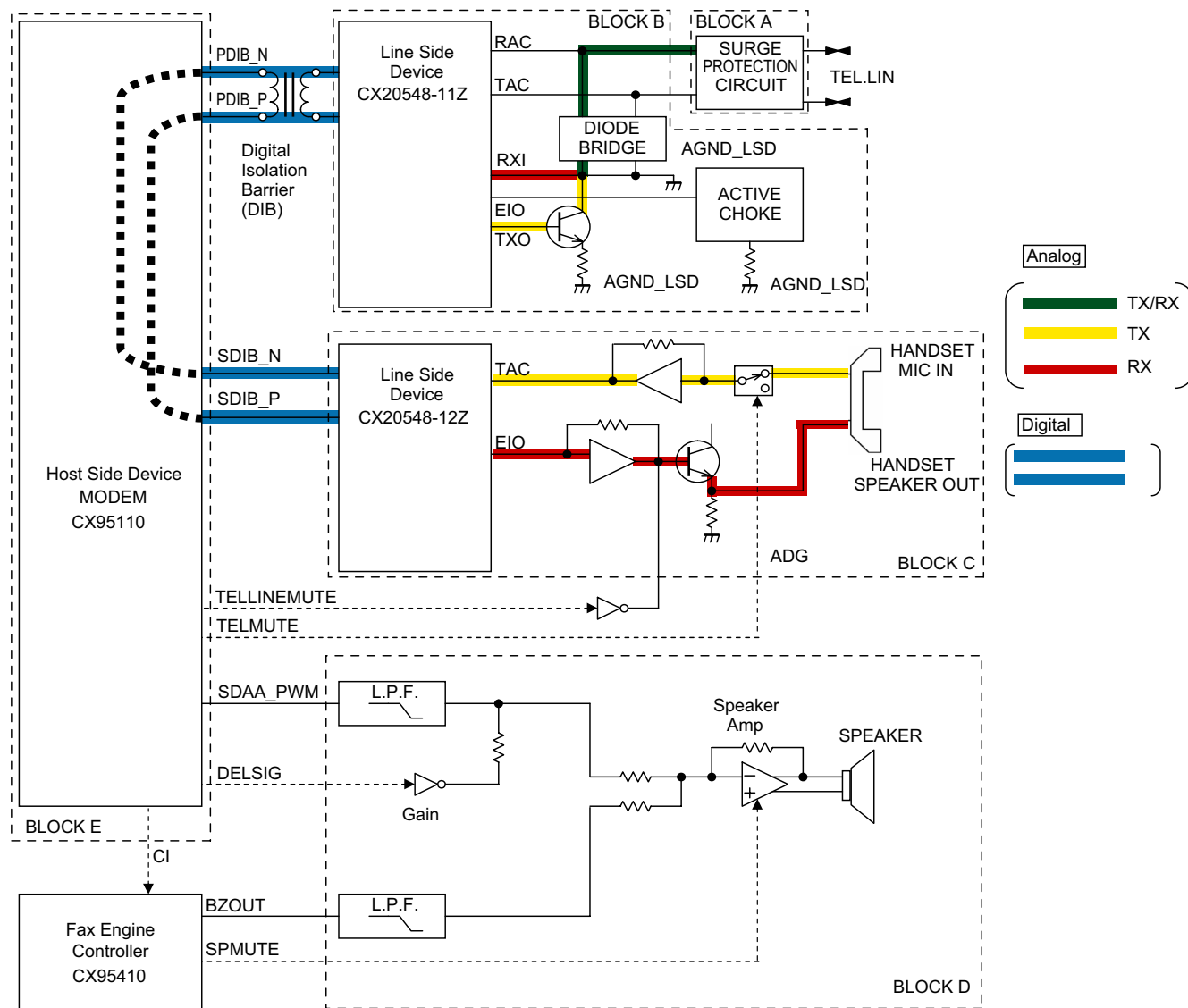


Fig. 7

CX20548 LSD GPIO DC Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Input Voltage	V_{IN}	-0.30	-	3.465	V	DVDD = +3.465V
Input Voltage Low	V_{IL}	-	-	1.0	V	
Input Voltage High	V_{IH}	1.6	-	-	V	
Output Voltage Low	V_{OL}	0	-	0.33	V	
Output Voltage High	V_{OH}	2.97	-	-	V	
Input Leakage Current	-	-10	-	10	μA	
Output Leakage Current (High Impedance)	-	-10	-	10	μA	
GPIO Output Sink Current at 0.33 V maximum	-	2.4	-	-	mA	
GPIO Output Source Current at 2.97 V minimum	-	2.4	-	-	mA	
GPIO Rise Time/Fall Time	-	20	-	100	ns	

Test Conditions unless otherwise stated: DVDD = +3.3V +5%; TA = 0°C to 70°C; external load = 50 pF

Pin Name	Pin No.	Pin I/O	I/O Type	Signal Description
System Interface Signals				
PWR	15	PWR	PWR	Unregulated Power Output. Unregulated power output from the internal rectifier, connect to AGND_LSD through C870.
VC	3	REF	REF	Output Middle Reference Voltage. Connect to AGND_LSD through C844, which must be placed close to pin 3. Use a short path and a wide trace to AGND_LSD pin.
AVDD	2	PWR	PWR	Analog Power Output. Provides external connection point for decoupling. (AVDD is routed internally to LSD analog circuits.). Connect to AGND_LSD through C828. C828 must be placed close to pins 2.
DVDD	1	PWR	PWR	Digital Power Output. Provides external connection point for decoupling. Connect to AGND_LSD through C830. Place C830 near pin 1.
PADDLE (AGND)	17	AGND_LSD	AGND_LSD	Paddle Analog Ground. The conductive surface located on the bottom of the package is connected internally to device analog ground. Connect to AGND_LSD.
DIB Interface Signals				
DIBP	14	I/O	I/O	DIB Positive. Positive terminal of DIB, connect to secondary of DIB transformer.
DIBN	16	I/O	I/O	DIB Negative. Negative terminal of DIB, connect to secondary of DIB transformer.
TIP and RING Interface Signals				
RAC, TAC	4, 5	I, I	Ia, a	RING DC Coupled and TIP DC Coupled. Un-rectified voltage from telephone line used to detect ring. Connect RAC to the diode bridge DC node (RING) through R802 (connects to pin 4). Connect TAC to the diode bridge DC node (TIP) through R804 (connects to pin 5).
EIC	11	O	Oa	Electronic Inductor Capacitor. Electronic inductor filtering capacitor. Connect to AGND_LSD through C858.
EIO	10	O	Oa	Electronic Inductor Output. Calculated voltage is applied to this output to control off-hook and DC VI mask operation. Connect to base of Q804.
EIF	9	I	Ia	Electronic Inductor Feedback. Connect to emitter of Q804 through R826.
RXI	6	I	Ia	Receive Analog Input. Receiver operational amplifier inverting input. AC coupled to the Bridge_CC node through R810 (connects to pin 6) and C810 in series. R810 and C810 must be placed very close to pin 6. The length of the PCB trace connecting R810 to the RXI pin must be kept at an absolute minimum.
TXO	8	O	Oa	Transmit Output. Outputs transmit signal and impedance matching signal; connect to base of transistor Q802.
TXF	7	I	Ia	Transmit Feedback. Connect to emitter of transistor Q802
Not Used				
GPIO	1	I/O	It/Ot12	General Purpose I/O. Leave open if not used.
Notes: 1. I/O types*: Ia Analog input It Digital input* Oa Analog output Ot12 Digital output* AGND_LSD Isolated LSD Analog Ground (isolated from the host system ground) *See CX20548 LSD GPIO DC Electrical Characteristics. (Page 5-20). 2. Refer to applicable reference design for exact component placement and values.				

3. Printer mechanism control block

3.1. Unit control

3.1.1 High voltage unit control

The high voltage unit outputs the following voltages:

- Main charger voltage (DC-950V + AC760V peak to peak)
- Transfer charger voltage (DC+3600V + AC760V peak to peak)
- Developing bias voltage (DC-200V)

The following signals are outputted from the CPU and Logic to control the above voltages.

- **MCON**

This signal is to turn on/off the main charger.

When this signal is outputted.

As a result, the main charger voltage is outputted to the secondary side of the transformer (B51).

- **TCON**

This signal is to turn on/off the transfer charger and the developing bias voltage.

- **PWMSIN**

This signal is to control the main charger voltage and the transfer charger voltage. The PWM pulse of about 300Hz is outputted.

This pulse waveform adds the AC component to the main charger voltage and the transfer charger voltage.

By changing the pulse duty of this signal, the main charger voltage and the transfer charger voltage are controlled.

3.1.2 Electrical connection

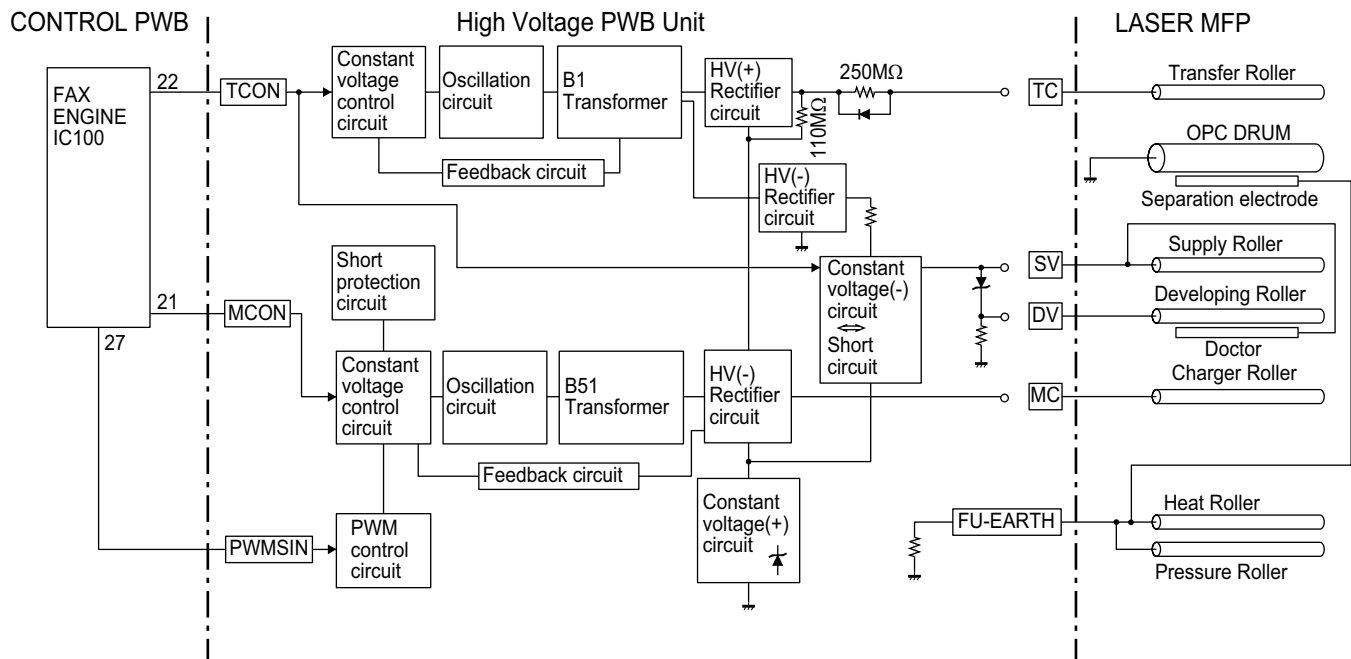


Fig. 8

3.1.3 Laser scanning unit

This unit controls the laser beam power and laser beam scanning.

The control is performed with the signals inputted outputted to or from the CPU and Logic circuit.

Laser scanning unit (LSU)

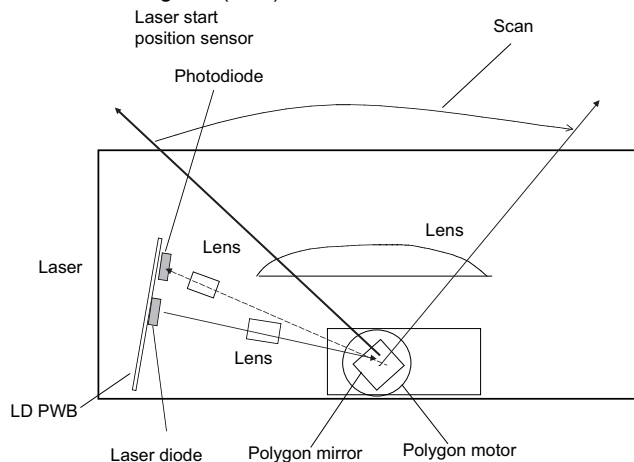


Fig. 9

Laser Scanning Unit (LSU)

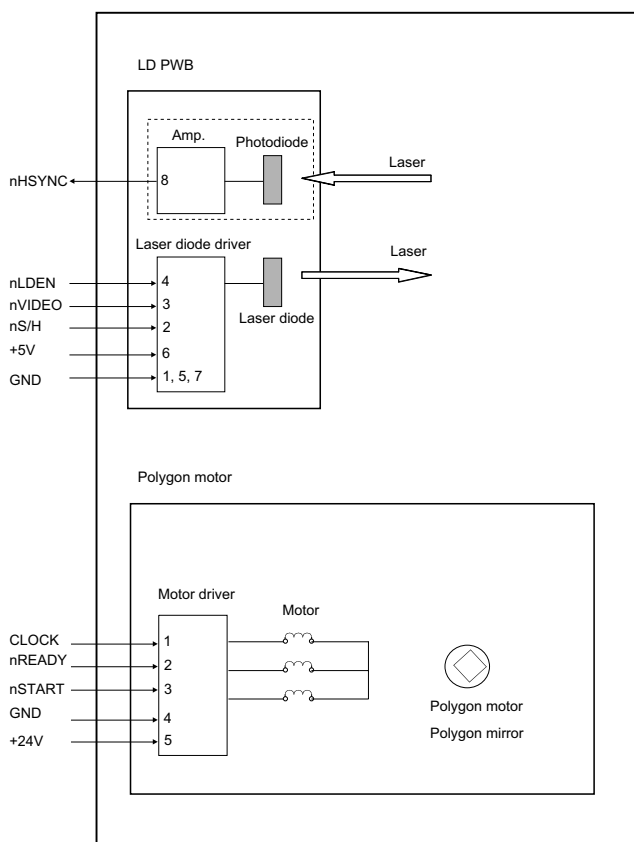


Fig. 10

1) Signal functions

PMCLK

Clock signal for driving the scanning motor. (2659.57Hz)

PMD

Scanning motor ON/OFF signal.

HSYNC

This signal is outputted when the laser beam scanned by the laser beam sensor signal is sensed by sensor (Photo diode).
Used for the left margin control.

VIDEO

This signal is used to control the laser diode emitting.
Not only when the laser beam is emitted to perform the LEND process, but also when the laser beam is emitted as image data, Fax Engine (IC100) controls and the signal is outputted from video terminal.

2) Laser beam power control

The laser beam power is controlled in the laser scanning unit.

This circuit functions to keep the laser beam output power at a constant level.

The laser beam output is monitored with photo diode for monitor. When the laser beam output rises above the specified value, the impedance of photo diode is decreased to decrease the monitor input voltage of the laser diode control IC.

Then the laser diode drive voltage is decreased to decrease the laser beam output to the specified level.

When the laser beam output is decreased below the specified level, the contrary operation are performed.

3) Timing of scanning

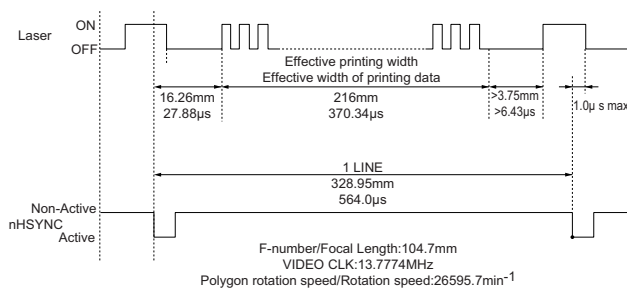


Fig. 11

a) Scanning motor interface

Pin No.	Terminal	I/O	Function
1	CLOCK	Input	Clock input
2	nREADY	Output	Motor rotation detect signal "L": Synchronous "OPEN": Asynchronous
3	nSTART	Input	Motor control signal "L": Start "OPEN": Stop
4	GND	-	GND
5	+24V	-	Power supply (+24V)

b) Laser Drive circuit operation timing

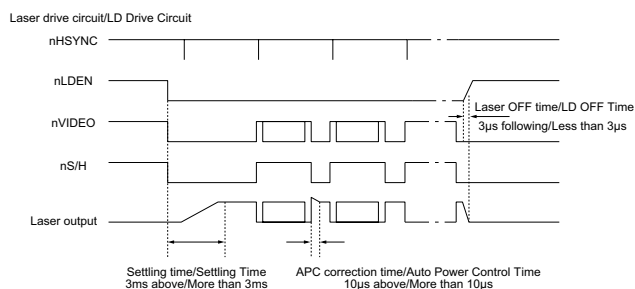


Fig. 12

c) Each signal injection timing of the scanner motor

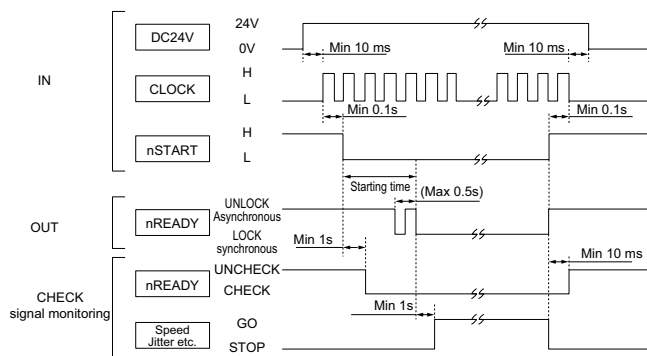


Fig. 13

d) Laser Drive circuit interface

Pin No.	Terminal	I/O	Function
4	nLDEN	Input	Signal enables Laser driven "H" : Disable "L" : Enables
2	nS/H	Input	APC control signal "H": Hold "L": Sampling
3	nVIDEO	Input	Laser control signal "H": Laser OFF "L": Laser ON
1	GND	-	GND
5	GND	-	GND
7	GND	-	GND
6	+5V	-	Power supply (+5V)
8	nHSYNC	Output (Open-collector)	Horizontal synchronize signal "H": Asynchronous "L": Synchronous

3.1.4 Fusing unit control

The fusing section is heated by the heater lamp (500W). The heater lamp is controlled (turned on/off) to keep the optimum temperature. The following signals are outputted by the CPU and Logic circuit for control.

1) Signal functions

• HLON

This signal is to turn on/off the heater lamp. When this signal is outputted turn on triac TRA1. Then an AC power is supplied to the heater lamp to turn on the heater lamp.

• RHT

This is the output signal of the thermistor which detects the surface temperature of the heat roller. It is inputted to the CPU. The heater lamp is turned on/off depending on the value of RTH voltage.

2) Protect against overheat

Though the heater lamp ON signal (HLON-) is normal, if triac TRA1 are kept ON, overheat may result.

To prevent against this, temperature fuses are used.

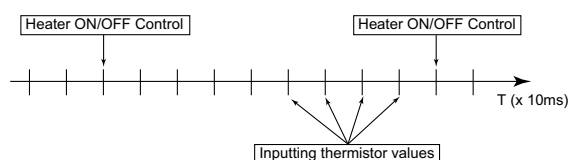
When the fusing roller surface temperature exceeds about 214 degrees C, the temperature fuse blows off to open the +24V power line which drives the power relay RL1, opening the power line for the photo triac TRA1. Therefore, the power is not supplied to the heater lamp.

A temperature fuse is also provided in the heater lamp power line. In case of overheating, the heater lamp power line is opened directly.

3) Timing of temperature detection and heater control

As shown by the following timings, four values of software thermistor voltage are input as A/D conversion values. The mean value of two medians among these four is regarded as the newest thermistor value (temperature).

- The value is compared with the temperature (200°C) control value every 100 ms.
- If the value is higher than 200°C, the heater becomes OFF. If lower, the heater becomes ON.
- The heater ON timing is in accordance with the timing of Power Zero Cross interrupt.



Timings of thermistor value input and heater control

Fig. 14

4) Heater control (Temperature control)

Control method

a) Base machine printing (Copy, List, Receiving)

- Temperature control is started when data to be printed are produced (or when slips are to be prepared).
- Temperature is controlled at 200 °C. (Heater OFF over 200 °C. Heater ON below 200 °C.)
- After printing, temperature is not controlled. (Heater is not turned ON.)
- Fan motor starts revolving from the beginning of temperature control and stops 120 seconds after printing is finished.

b) PC printing

- Temperature control is started when PC starts printing.
- Temperature is controlled at 200 °C. (Heater OFF over 200 °C. Heater ON below 200 °C.
- After printing, temperature is not controlled.
- Fan motor starts revolving from the beginning of temperature control and stops 120 seconds after printing is finished.

Temperature control is not started from the start of printing because the first copying time should be within 28 seconds.

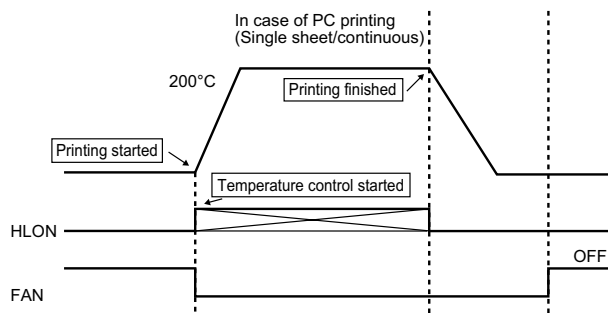


Fig. 15

3.1.5 Electrical connection

- Heater lamp: The 500W halogen lamp is used.
- Thermistor: Thermistor of chip type with good response is used to respond to rapid heating of the heat roller.
- Temperature fuse 1 (152°C): Temperature fuse 1 is installed to the fusing cover. It blows off when the ambient temperature of the fusing cover rises abnormally (152°C).
- Temperature fuse 2 (216°C): Temperature fuse 2 is in close contact with the heat roller. It blows off when the heat roller temperature rises abnormally high (216°C).

The heat roller surface temperature is maintained to the optimum level by controlling ON/OFF of the heater lamp according to the temperature data (voltage) from the thermistor. The heat roller surface temperature is controlled to 200°C. Two temperature fuses are provided to protect the heat machine from an abnormally high temperature in the fusing section. The heater lamp is lighted by the AC power.

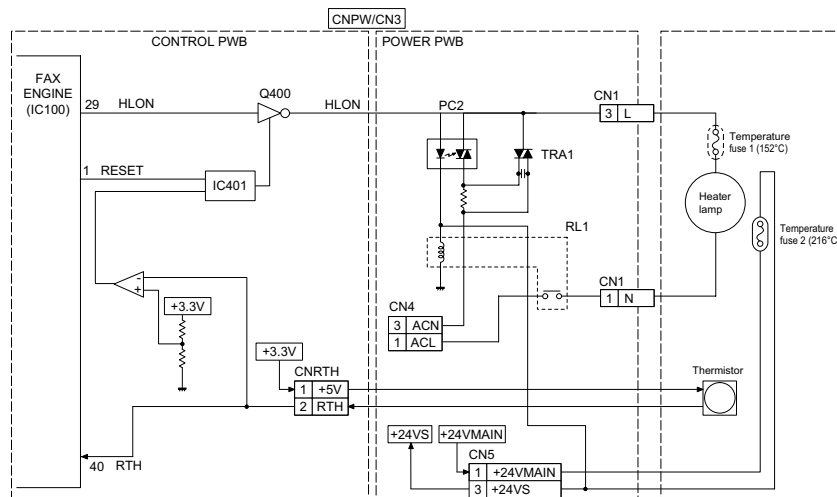


Fig. 16

[3] Circuit description of power supply PWB

This power supply unit has the function to convert the AC120V (50/60Hz) to DC24V, and provide these outputs to the control PWB. The following explains the function of each block. (See Fig. 17)

1. Filter circuit block

This circuit reduces the outgoing noise through the input lines which is generated in the power supply unit, and prevents the invasion of the noise from the lines. (the excessive surge such as the thunder is prevented by the varistor (Z1).)

2. Rectification and smoothing circuit block

This circuit rectifies and smoothes the AC input, and provides the DC voltage to the switching circuit block.

3. Switching circuit block

This circuit converts the DC voltage (provided from the Rectification and smoothing circuit block) to the high-frequency pulse voltage by FET (Q1)'s switching (on/off repeat), and provides the energy to the transformer (T1). It discharges the energy (charged during the FET ON time) to the secondary side during the FET OFF time through the secondary windings. The output voltages on the secondary side provided by the energy depend on the ratio of the winding turns (primary: secondary) etc.

4. Control circuit block

This circuit block controls the output voltage by transmitting the detected 24V voltage to the primary control circuit through the photo-coupler (PC1). In case of the over-current, this circuit reduces providing the energy to the transformer. In case of the over-voltage, this circuit reduces providing the energy to the transformer by letting the Power-Zener (D104; connected between the 24V output voltage and GND) into the short mode and letting the over-current protection circuit work.

5. +24V output circuit block

This circuit block rectifies and smoothes the high-frequency pulse voltage provided by the transformer, and provides the DC24V output to the control PWB. The output voltage is adjusted by the variable resistor (VR101).

6. +24V MAIN output circuit block

This circuit block supplies DC24V output to control PWB through a connector (CN2) from 24V provided by the transformer.

7. +24VS circuit block

This circuit block supplies DC24V output to +24VS through a connector (CN5) from 24V MAIN.

8. AC output circuit block

This circuit block supplies AC output from AC input to control PWB through the optical-isolator (PC2) and the power-relay (RL1) by signals (+24VS /HEATER ON).

9. Zero cross circuit block

This circuit block rectifies the AC input, and provides the ZC signal to control PWB through the photo-coupler (PC3).

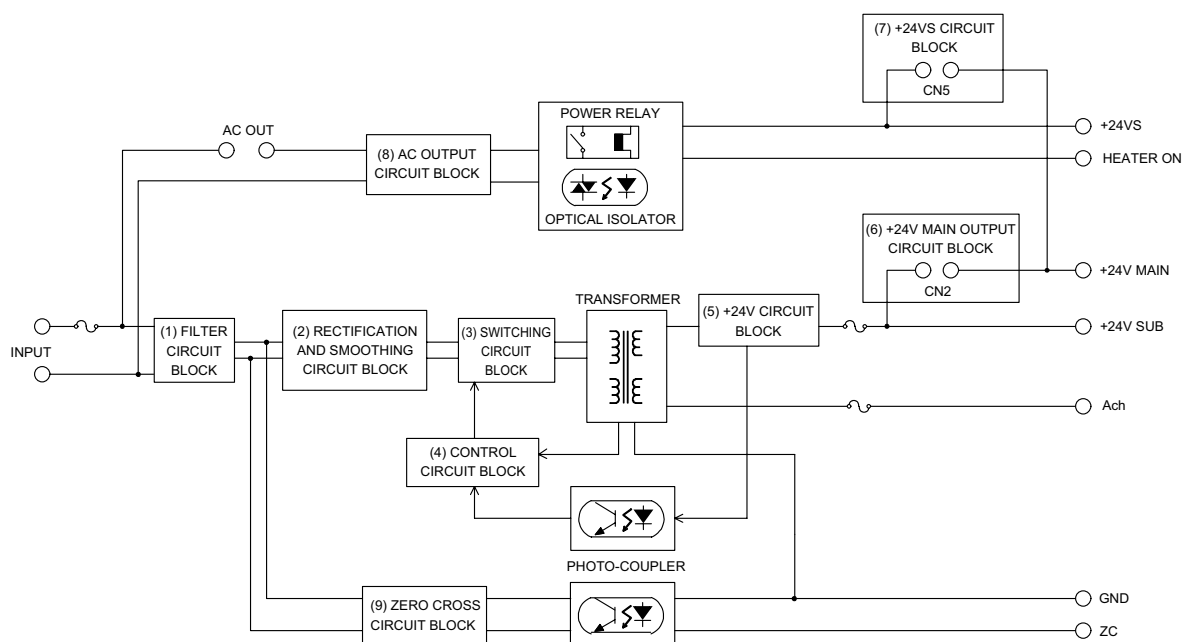


Fig. 17

[4] Circuit description of CIS unit

1. CIS

Cis is an image sensor which puts the original paper in close contact with the full-size sensor for scanning, being a monochromatic type with the pixel number of 1,728 dots and the main scanning density of 8 dots/mm.

It is composed of sensor, rod lens, LED light source, light-conductive plate, control circuit and so on, and the reading line and focus are previously adjusted as the unit.

Due to the full-size sensor, the focus distance is so short that the set is changed from the light weight type to the compact type.

2. Waveforms

The following clock is supplied from IC100 (CX95110) of the control board, and VO is output.

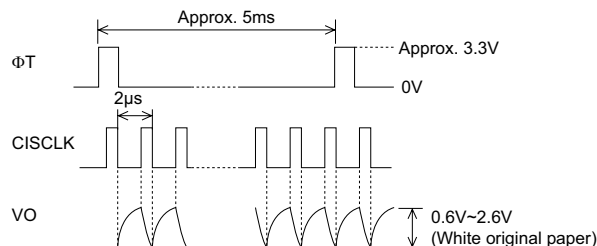


Fig.18

[5] Circuit description of operation panel PWB

1. Operational description

1) Operation panel PWB

The operation panel PWB consists of 70 keys.

This PWB includes the four KEN lines (5bit) and the seven /SEN lines (7bit). The four KEN lines are controlled by CX95410-12Z (Fax Engine) on control PWB and the seven SEN lines return signals to Fax Engine control PWB. Four KEN signals are inputted to decoder owing to make Y signal.

2) LCD

The LCD display density is not controlled. Other lines are included E/RS/VO signals.

3) LED

The LED on this PWB is also controlled by LEDON (1bit signal) from control PWB.

2. Block diagram

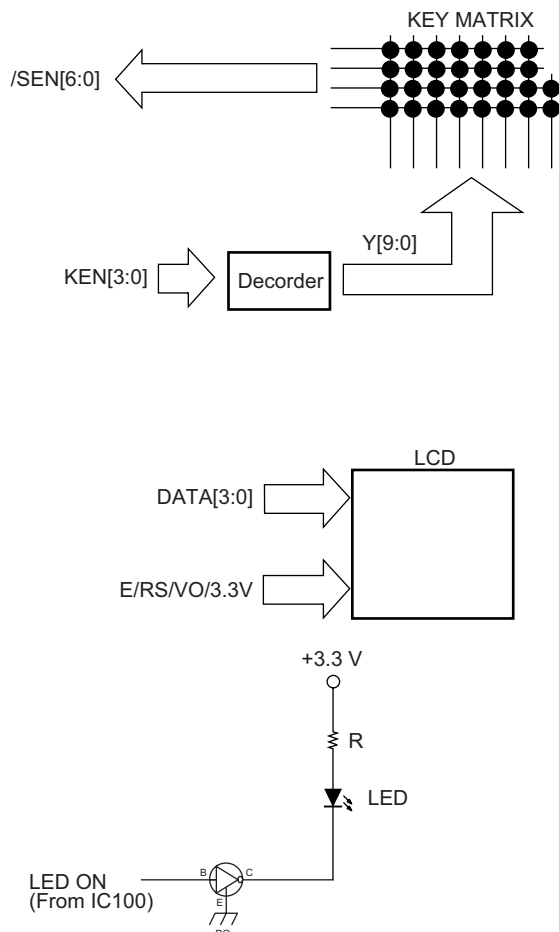
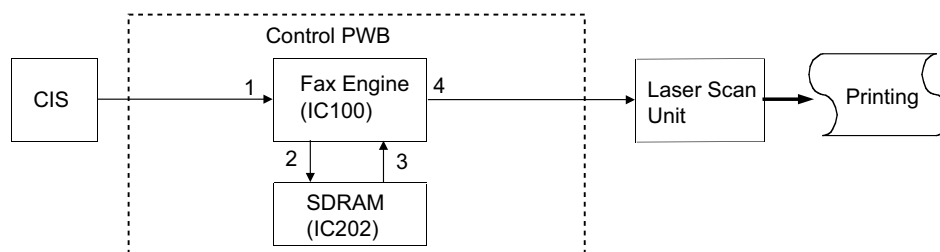


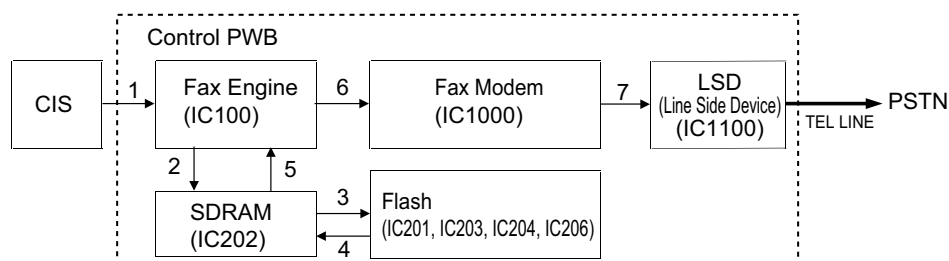
Fig. 19

[6] Data flow chart

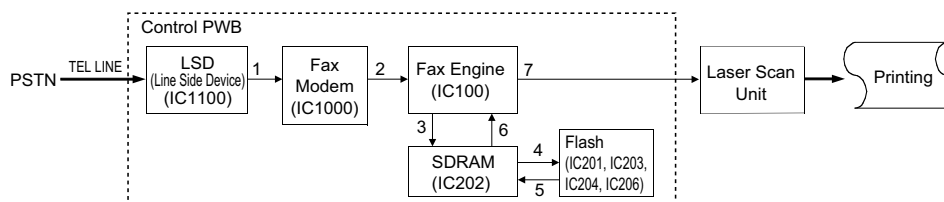
1. COPY



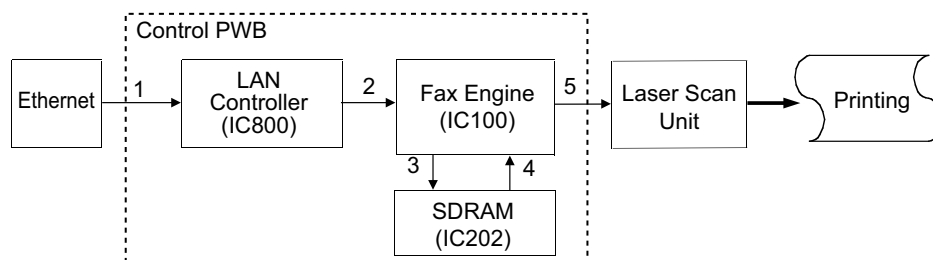
2. FAX/SEND



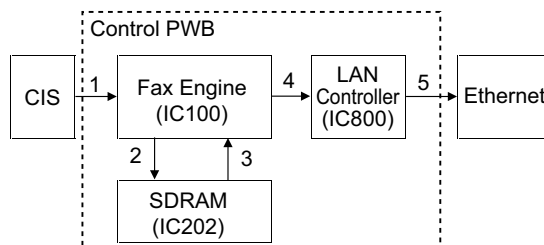
3. FAX RECEIVE



4. NET WORK (Print)

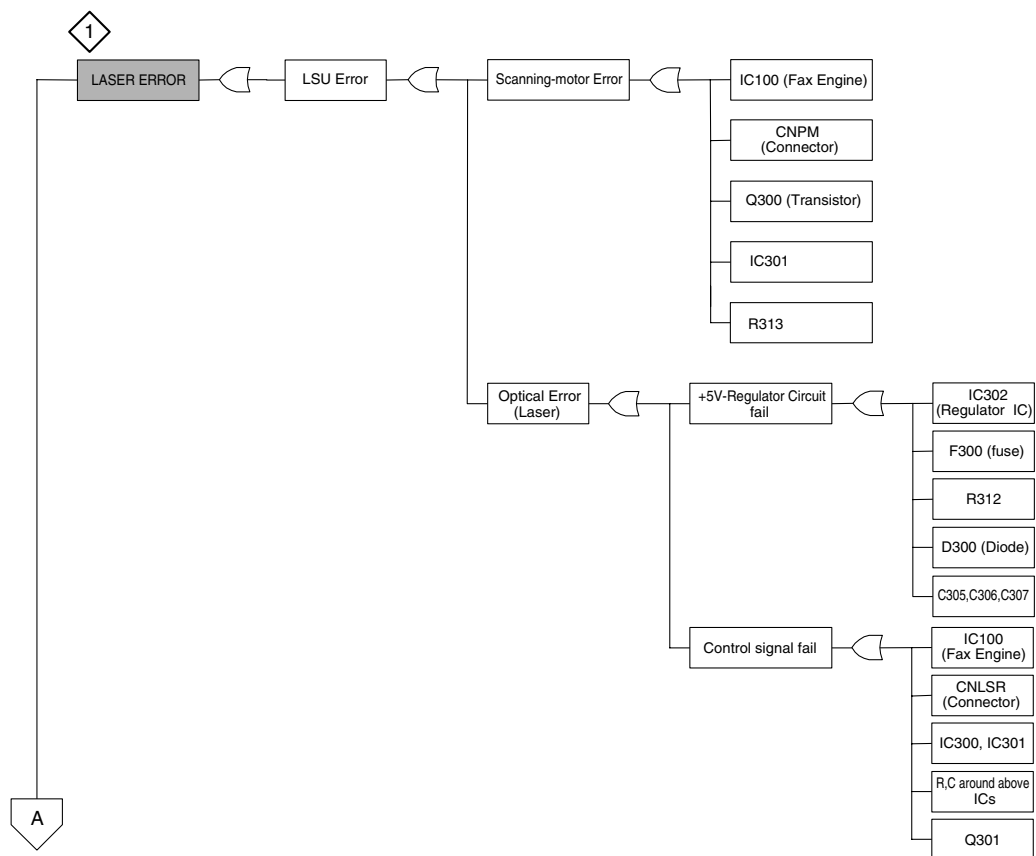


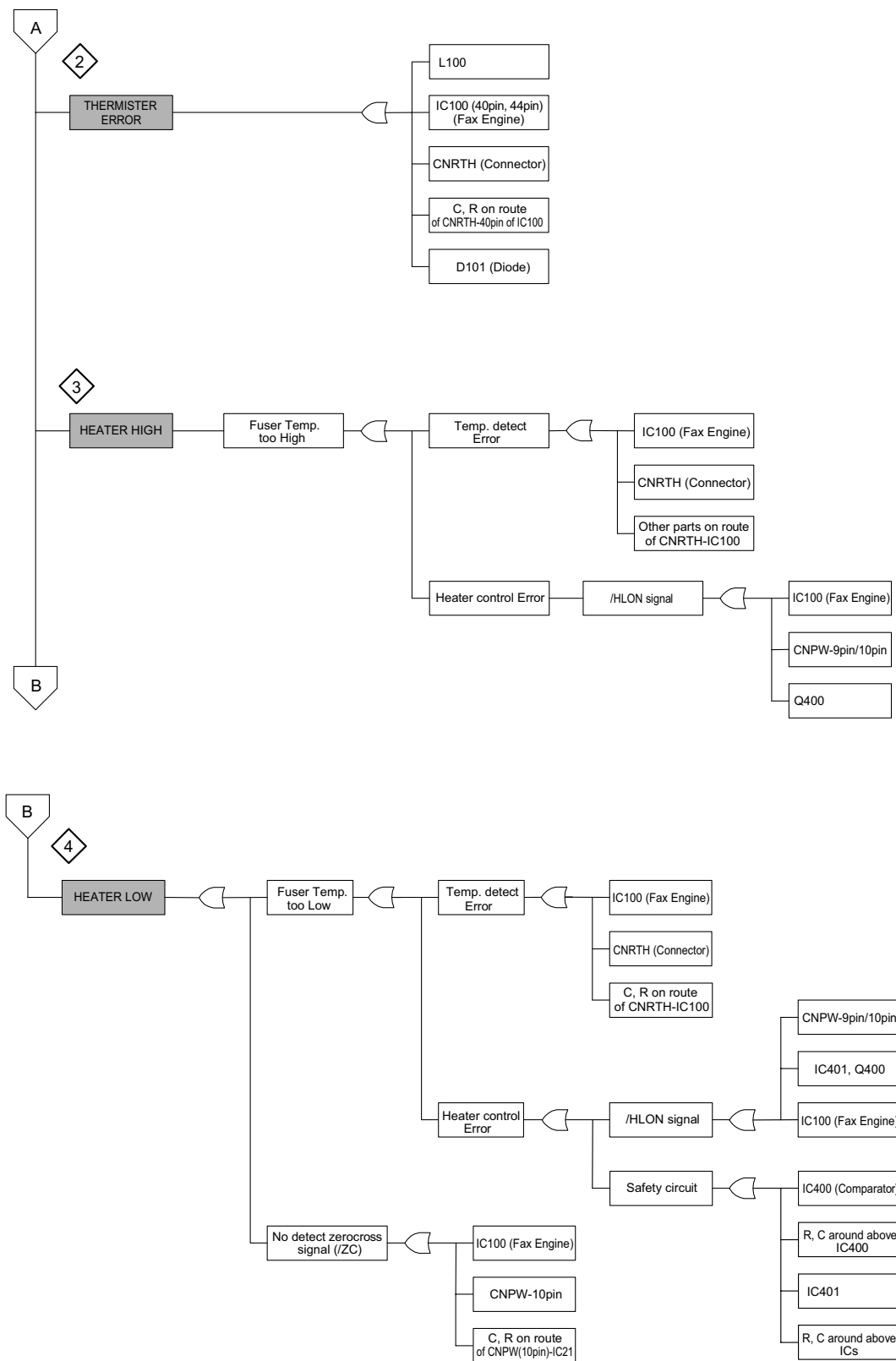
5. NET WORK (Scan)



[7] Troubleshooting**1. Printer error table**

LASER ERROR	The Fax Engine detected the optical unit (LSU) error.
THERMISTER ERROR	Thermistor error was detected.
HEATER HIGH	High temperature error was detected.
HEATER LOW	Low temperature error was detected.

2. Troubleshooting of control PWB

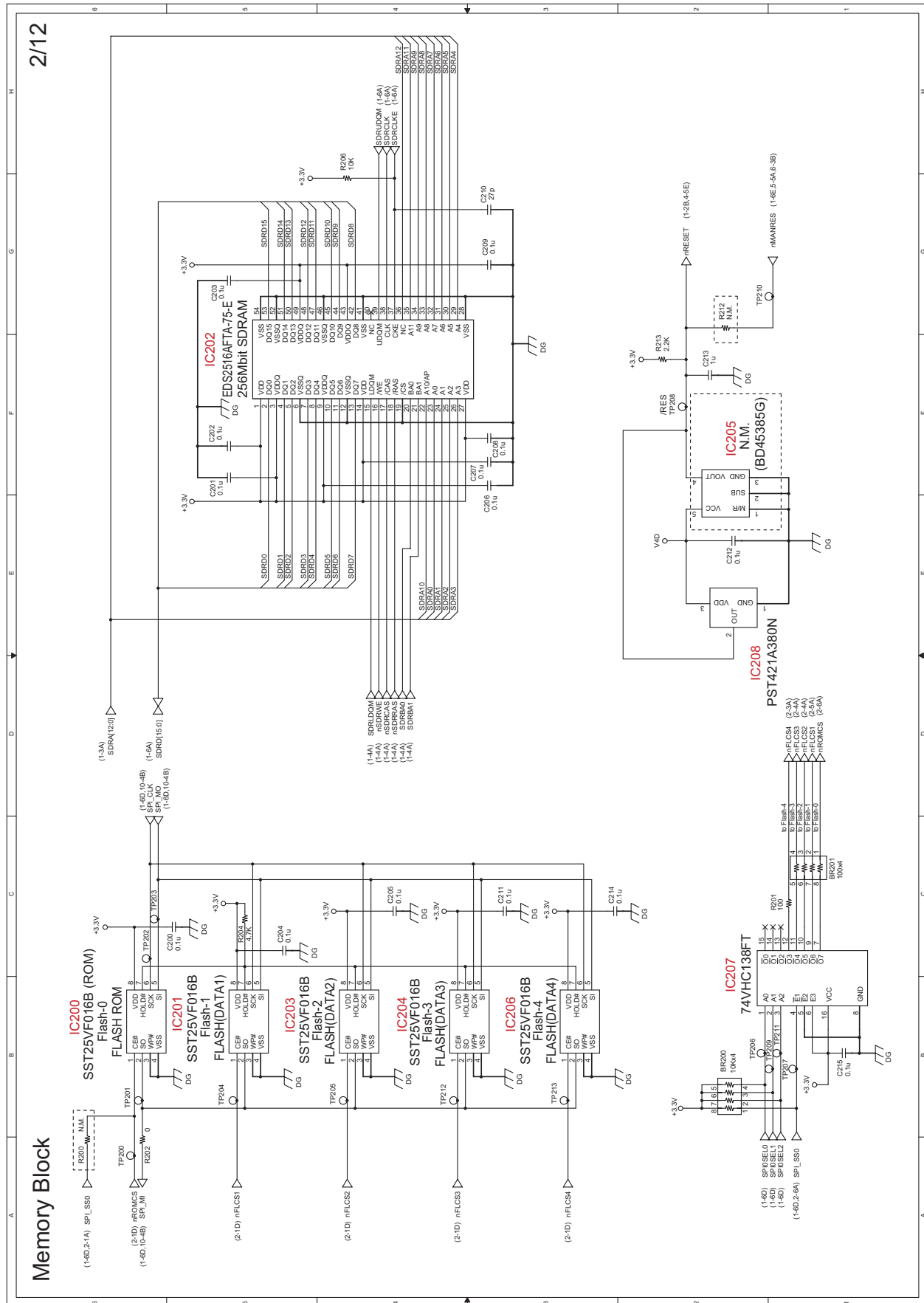


1. Main Control Block (1a/12)



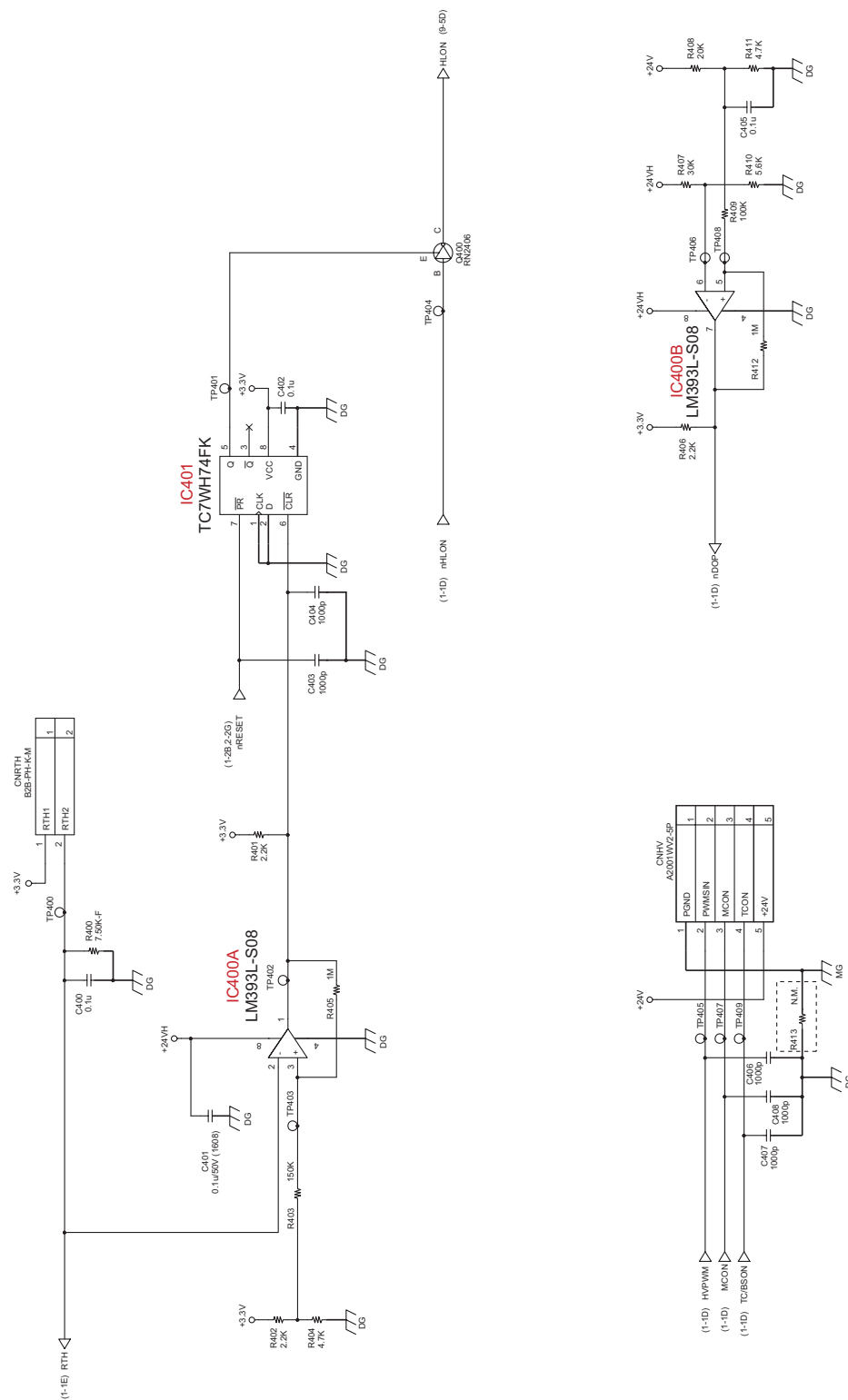


3. Memory Block (2/12)



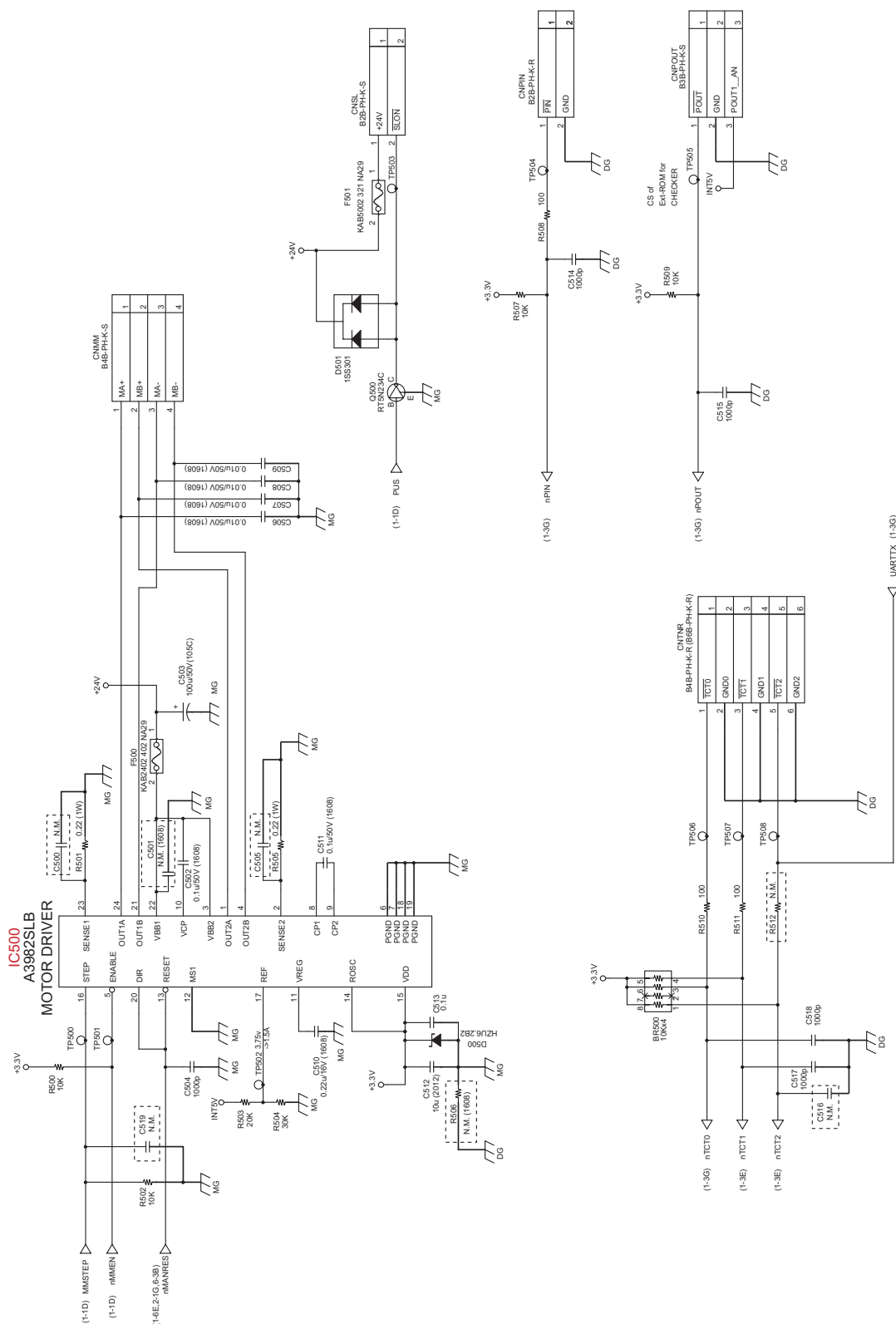


4/12

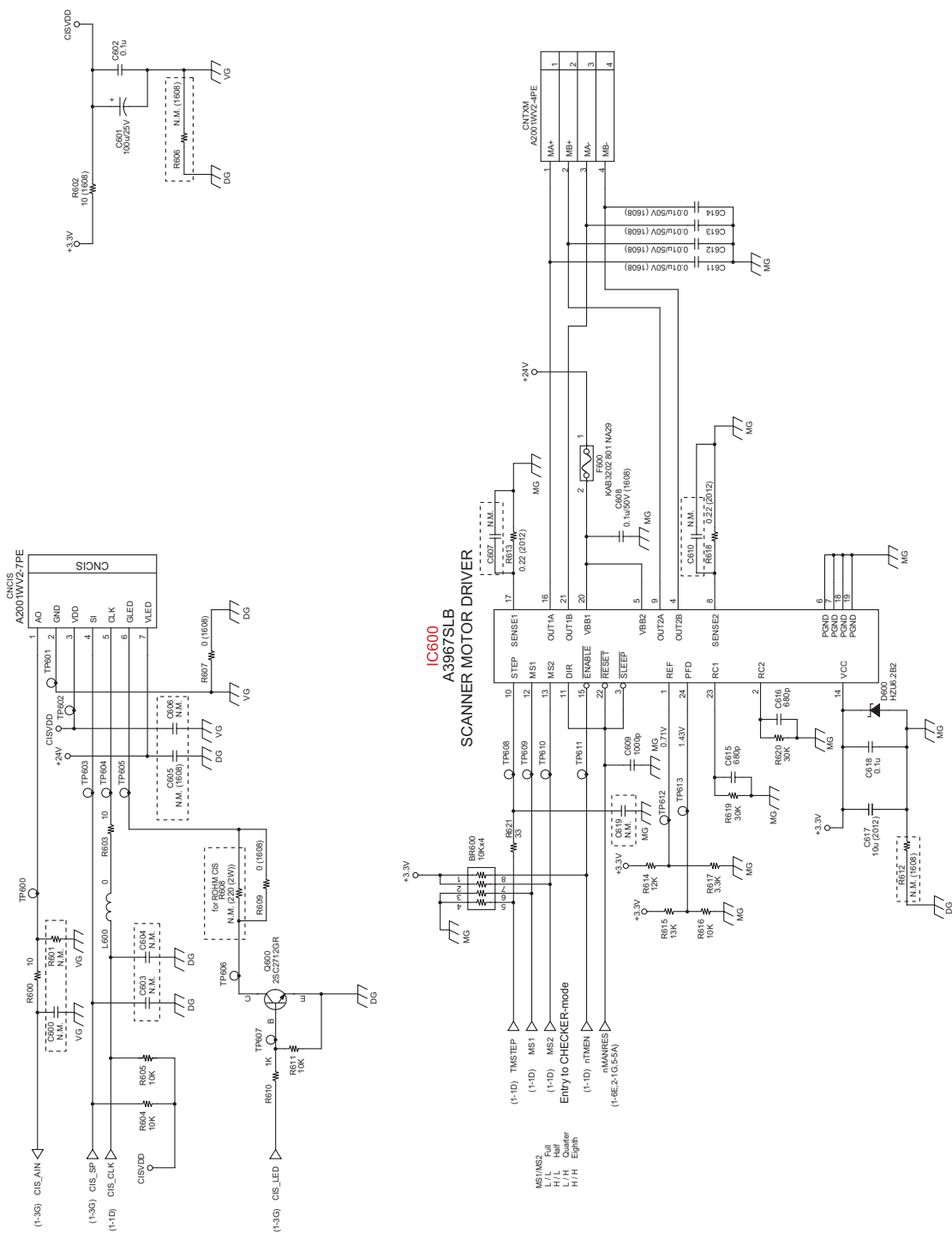


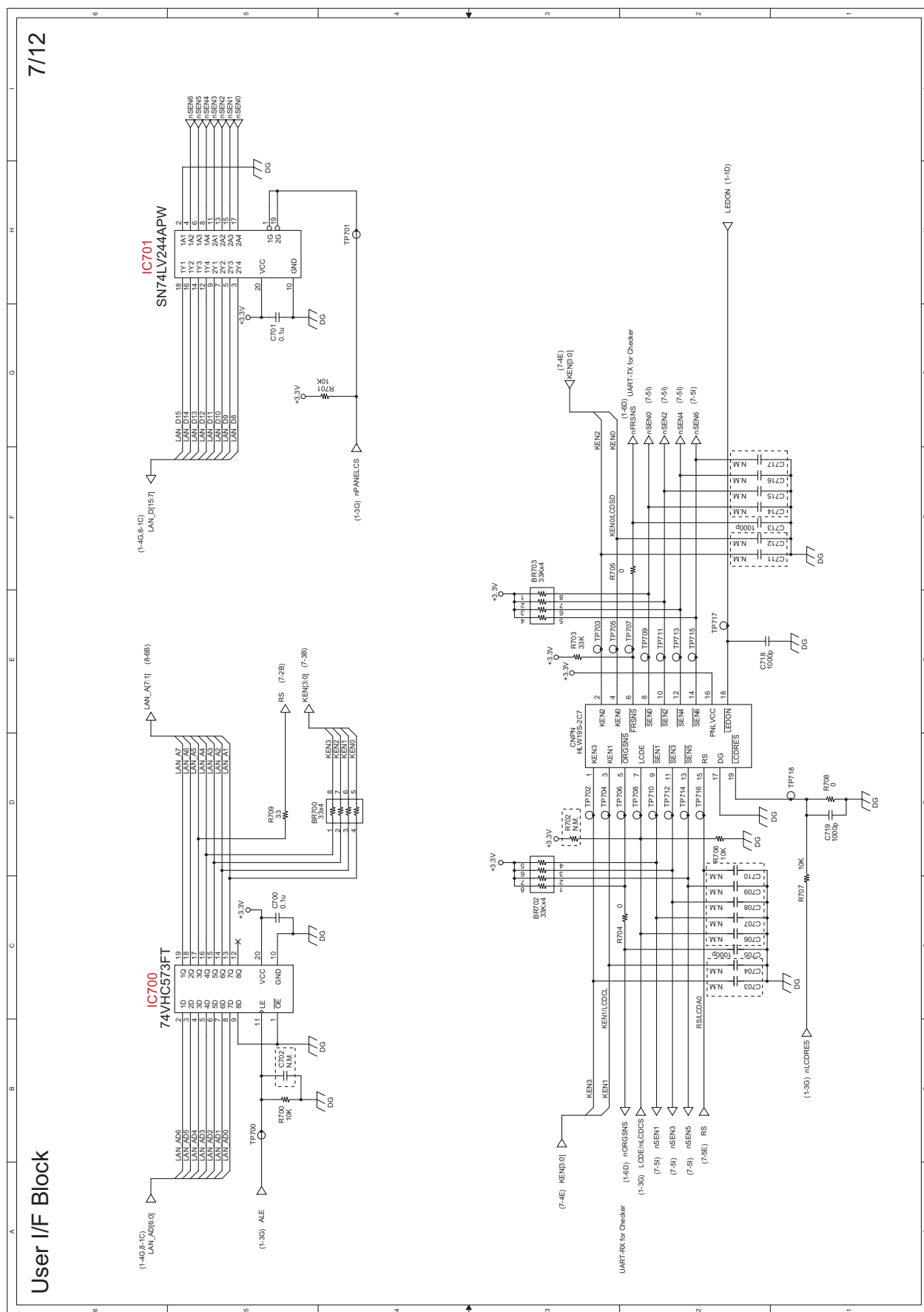
Printer Control (Main Motor & Sensors) Block

5/12



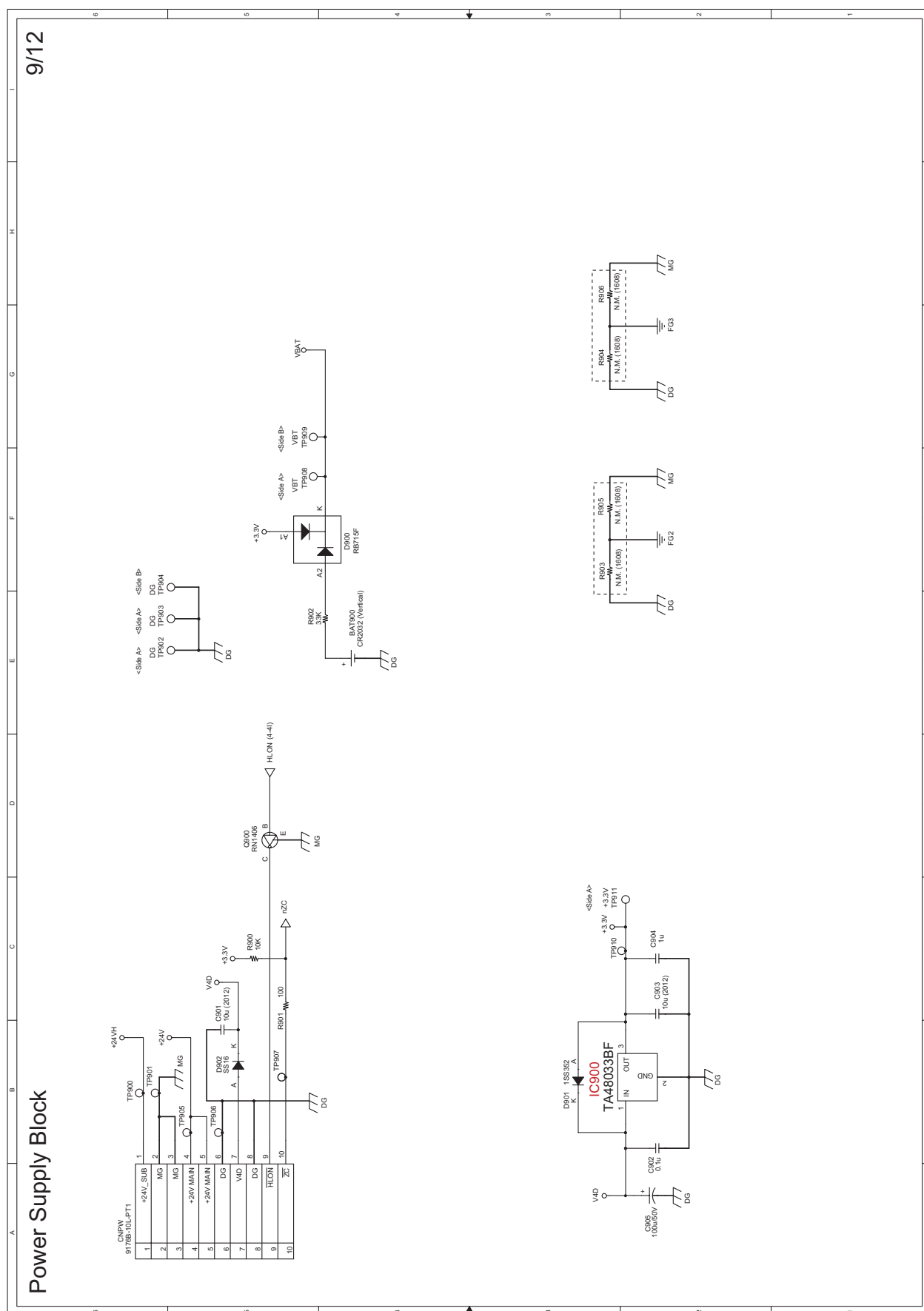
6/12



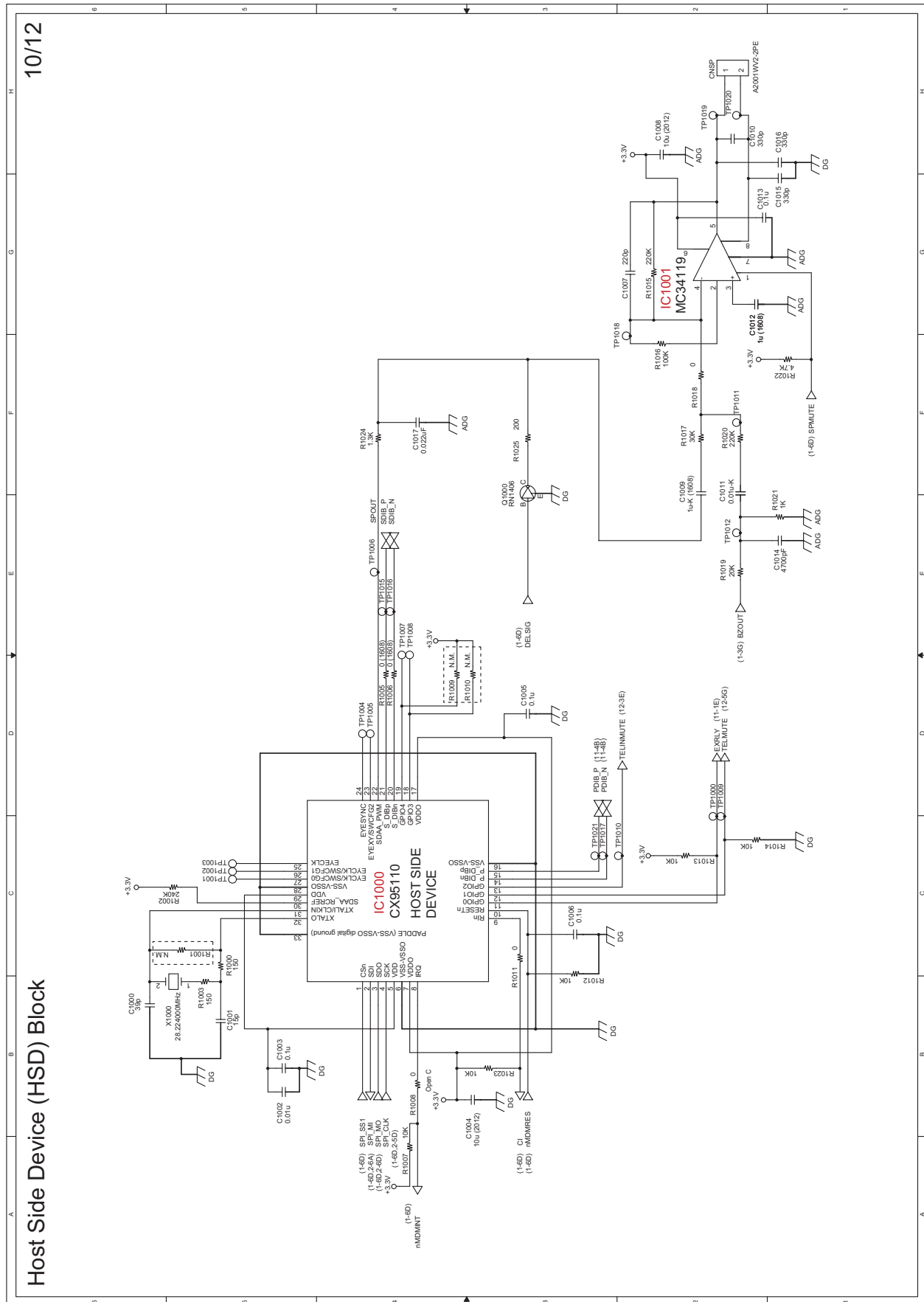




10. Power Supply Block (9/12)



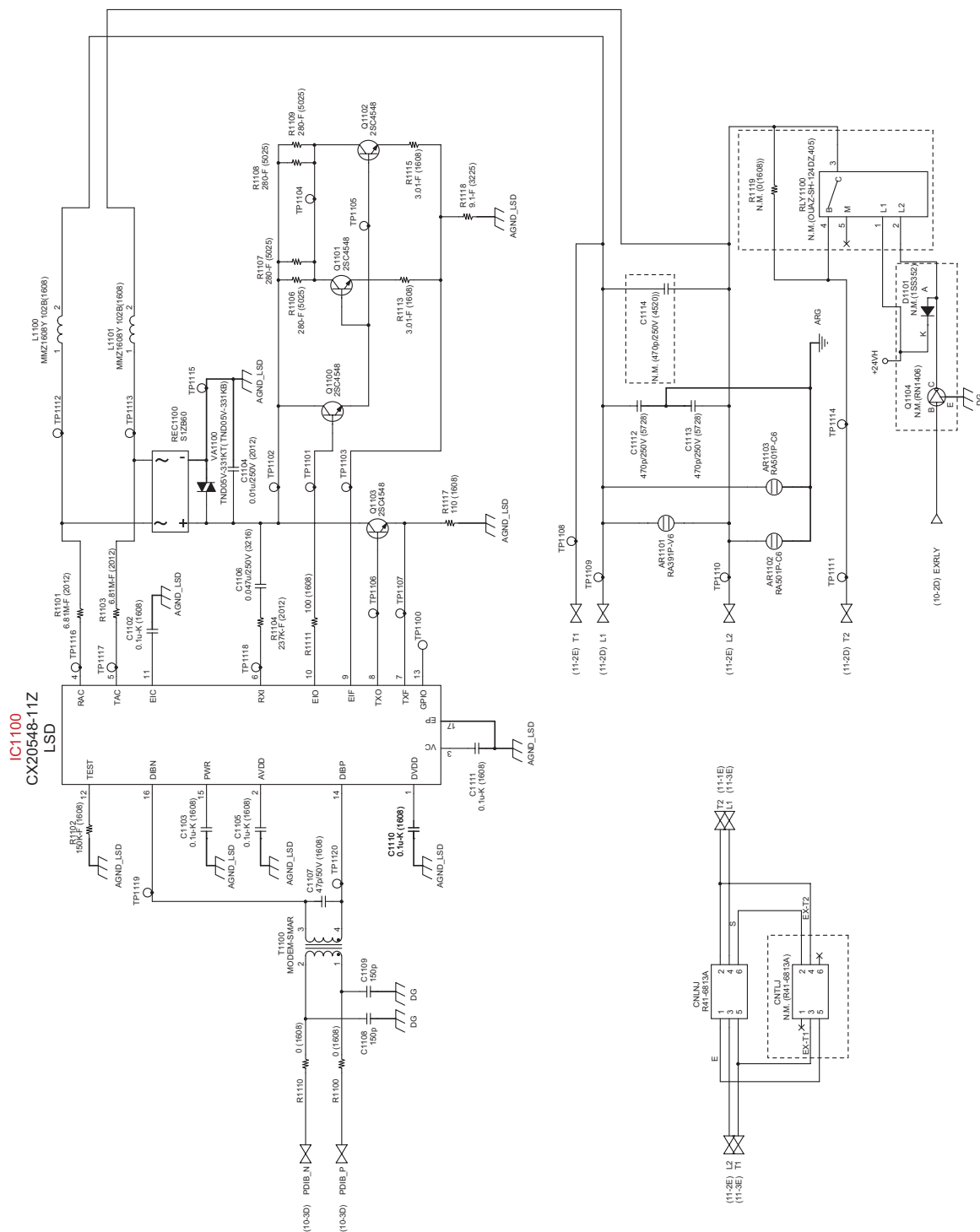
11. Host Side Device (HSD) Block (10/12)



SmartDAA4 Line Side Device (LSD) Block

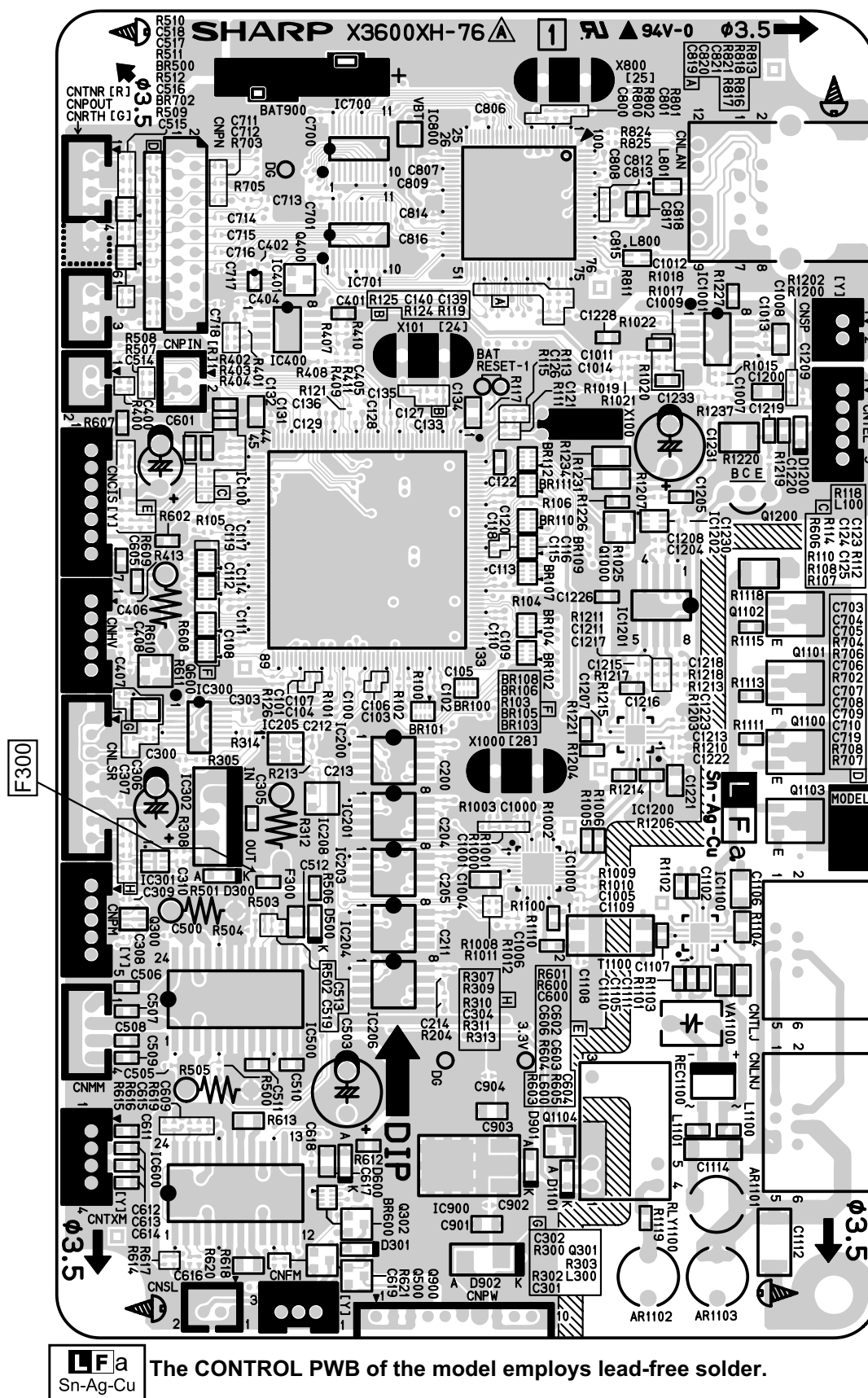
TNV (Telephone Network Voltage) circuits.

11/12

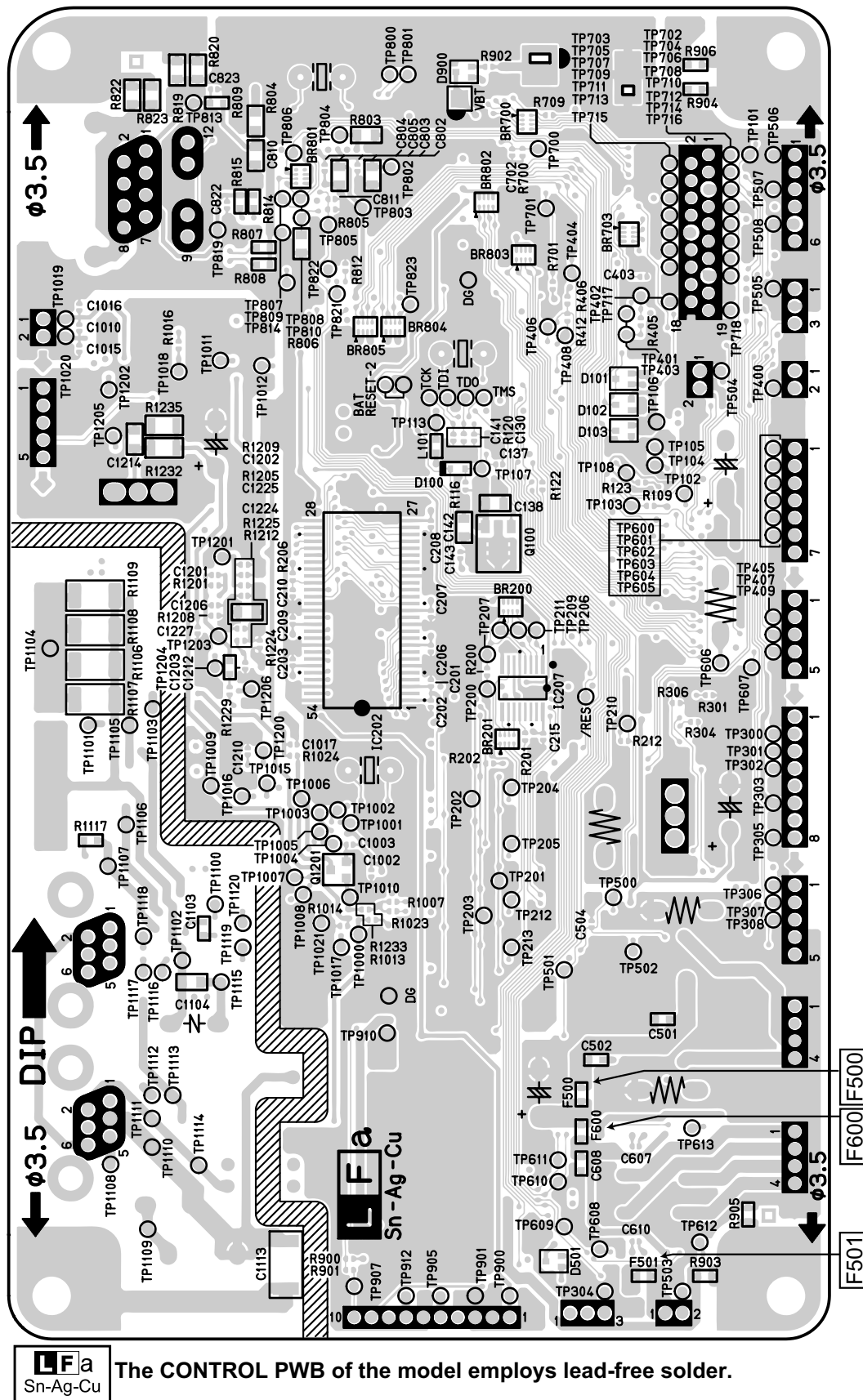




14. Control PWB parts layout (Top side)

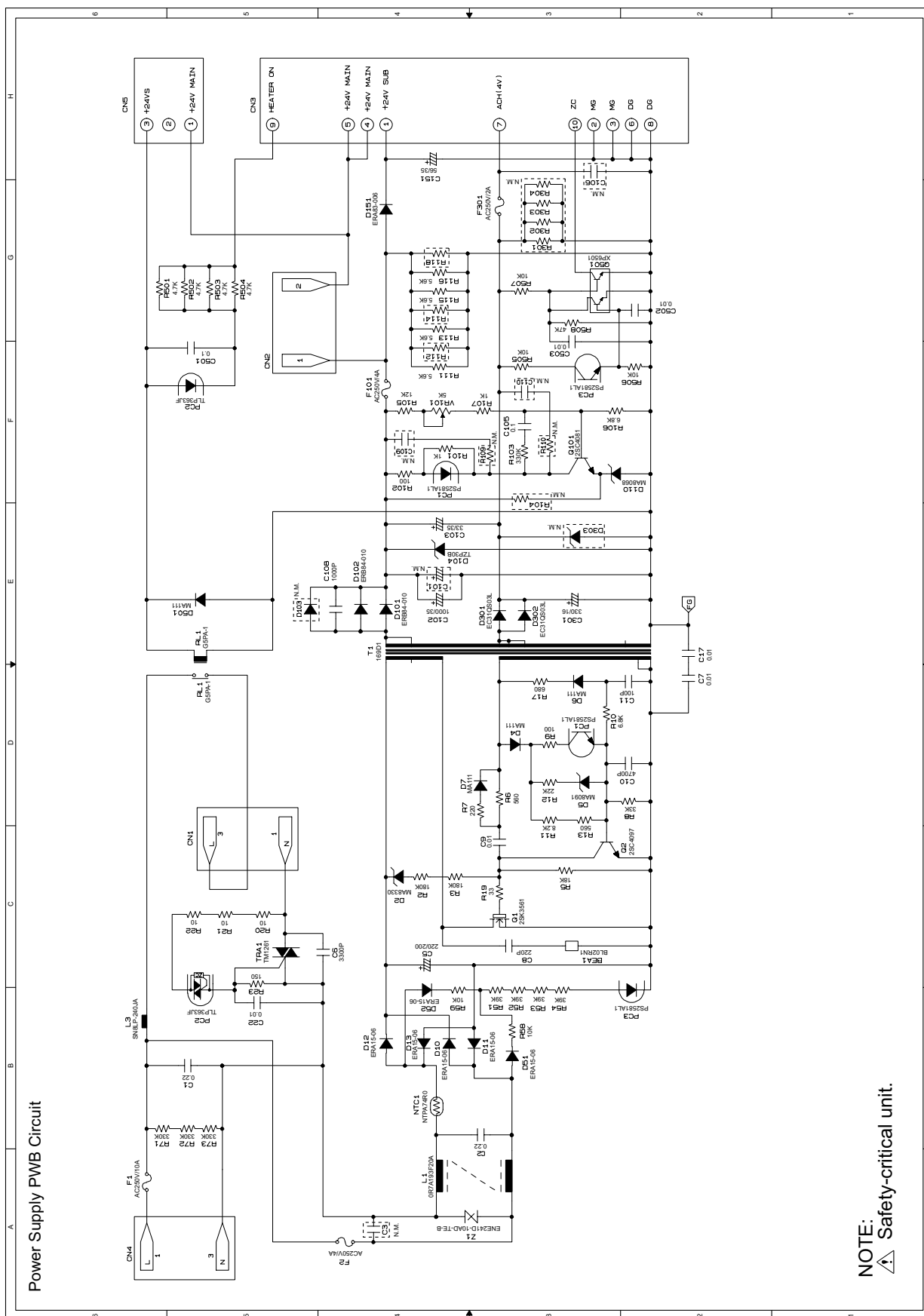


15. Control PWB parts layout (Bottom side)

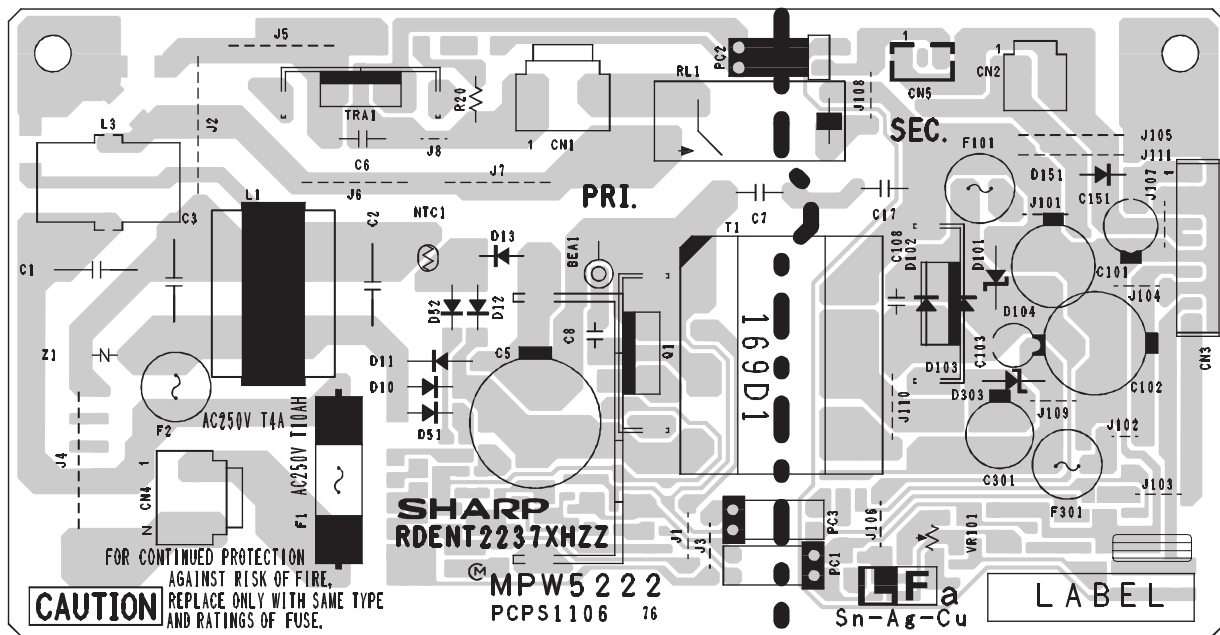


[2] Power Supply PWB circuit

1. Power Supply PWB circuit

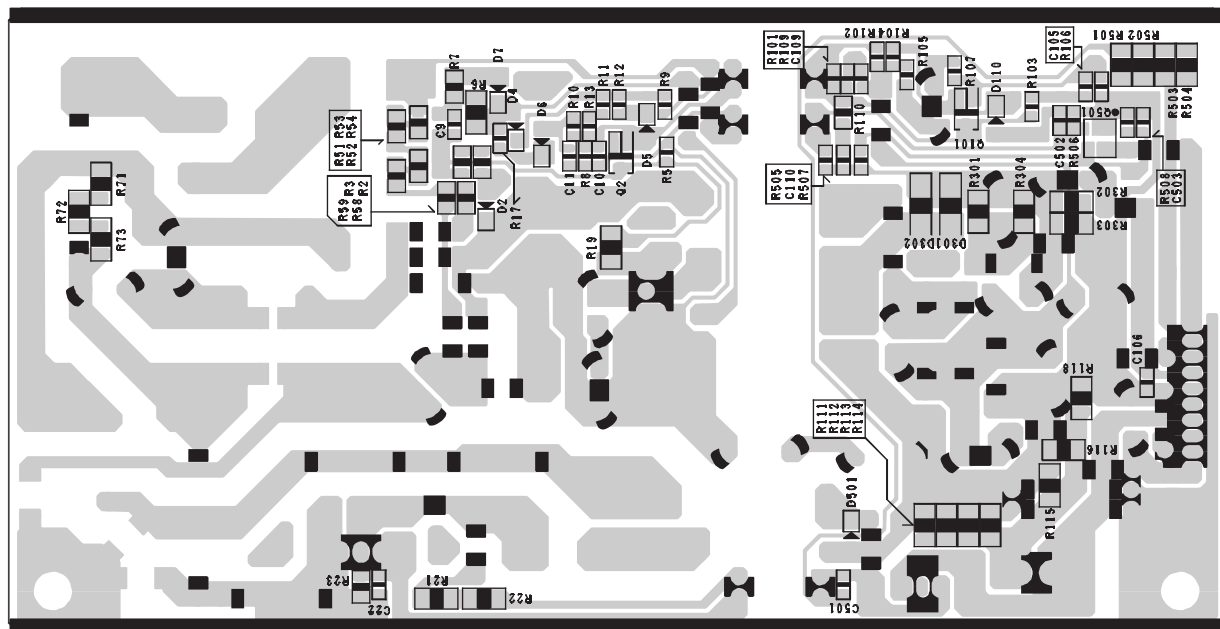


2. Power Supply PWB parts layout (Top side)



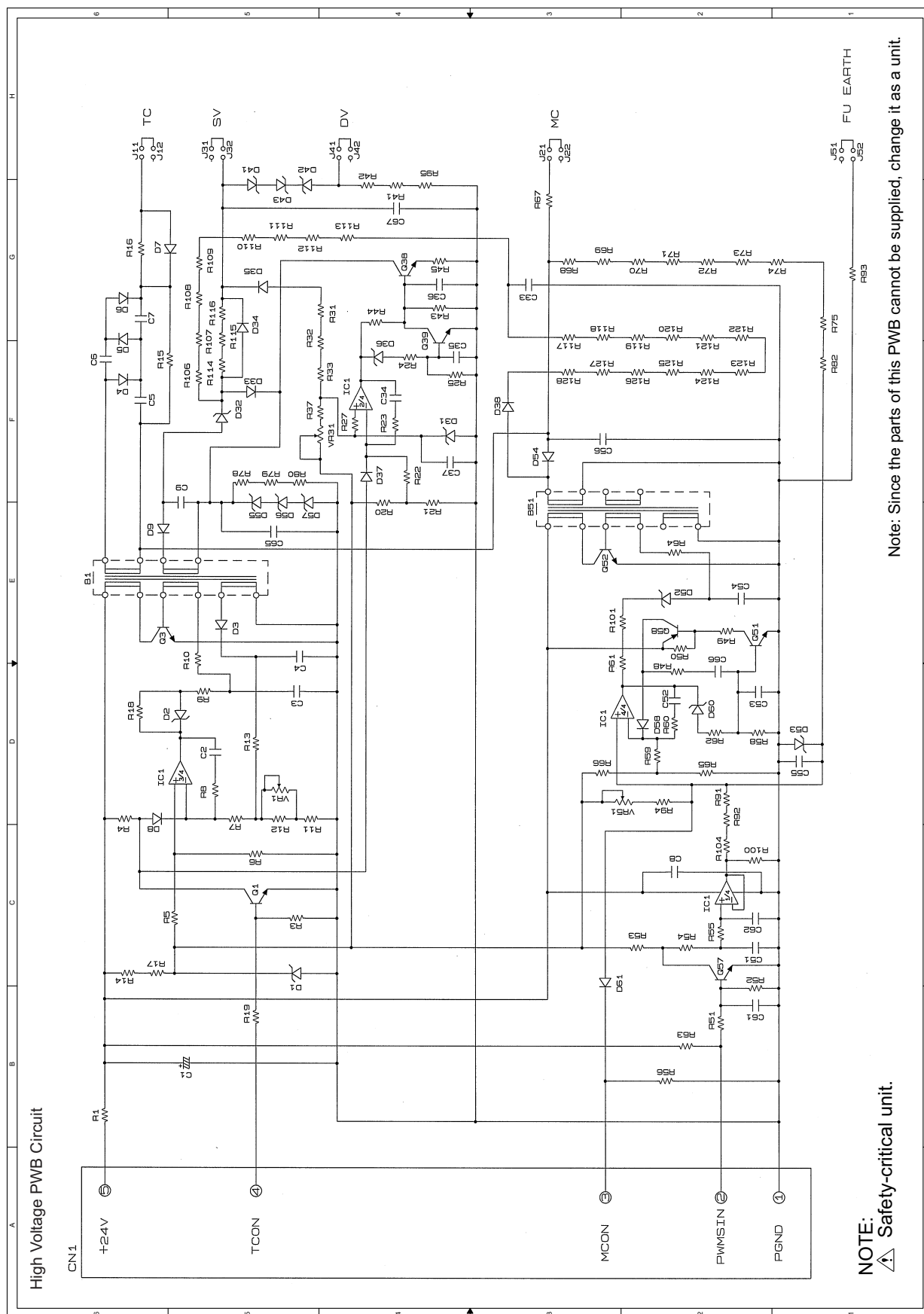
LFa
Sn-Ag-Cu The POWER SUPPLY PWB of the model employs lead-free solder.

3. Power Supply PWB parts layout (Bottom side)



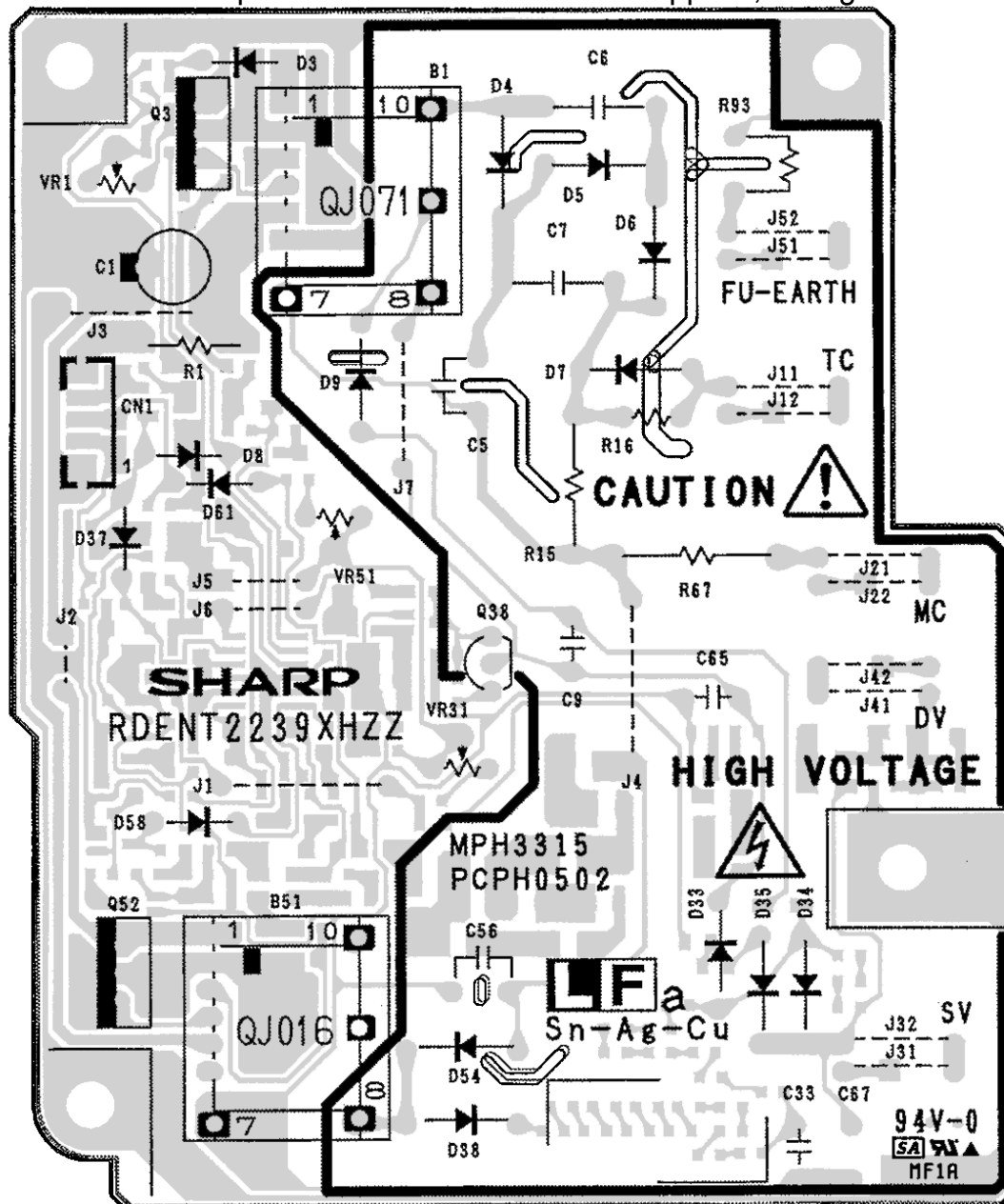
[3] High Voltage PWB circuit

1. High Voltage PWB circuit



2. High voltage PWB parts layout (Top side)

Note: Since the parts of this PWB cannot be supplied, change it as a unit.

**CAUTION - HIGH VOLTAGE**

The unit's back cover should never be opened by anyone other than a qualified serviceperson. There are many high voltage parts inside the unit, and touching them is dangerous.



The HIGH VOLTAGE PWB of the model employs lead-free solder.

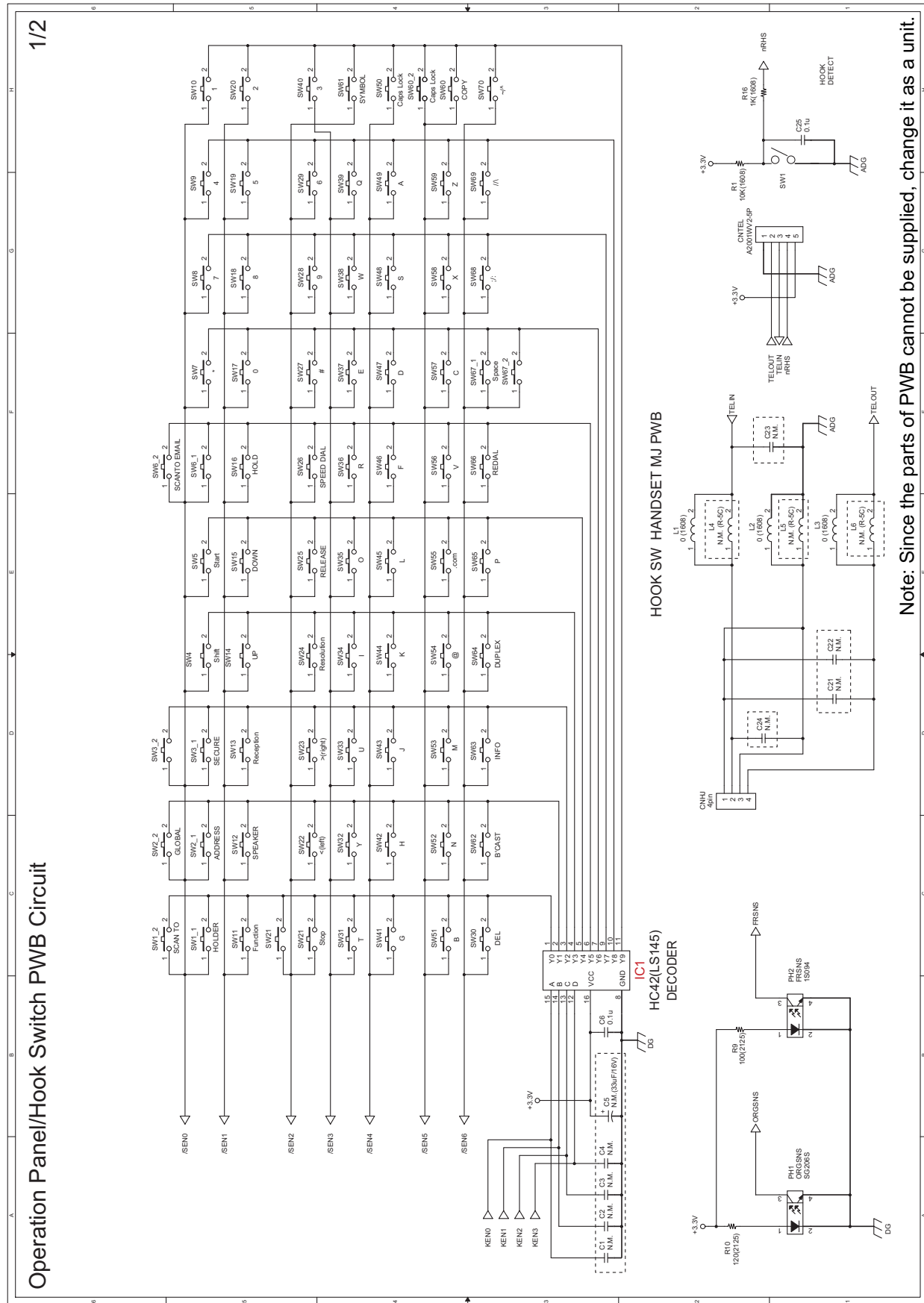
Note: Since the parts of this PWB cannot be supplied, change it as a unit.

CAUTION - HIGH VOLTAGE

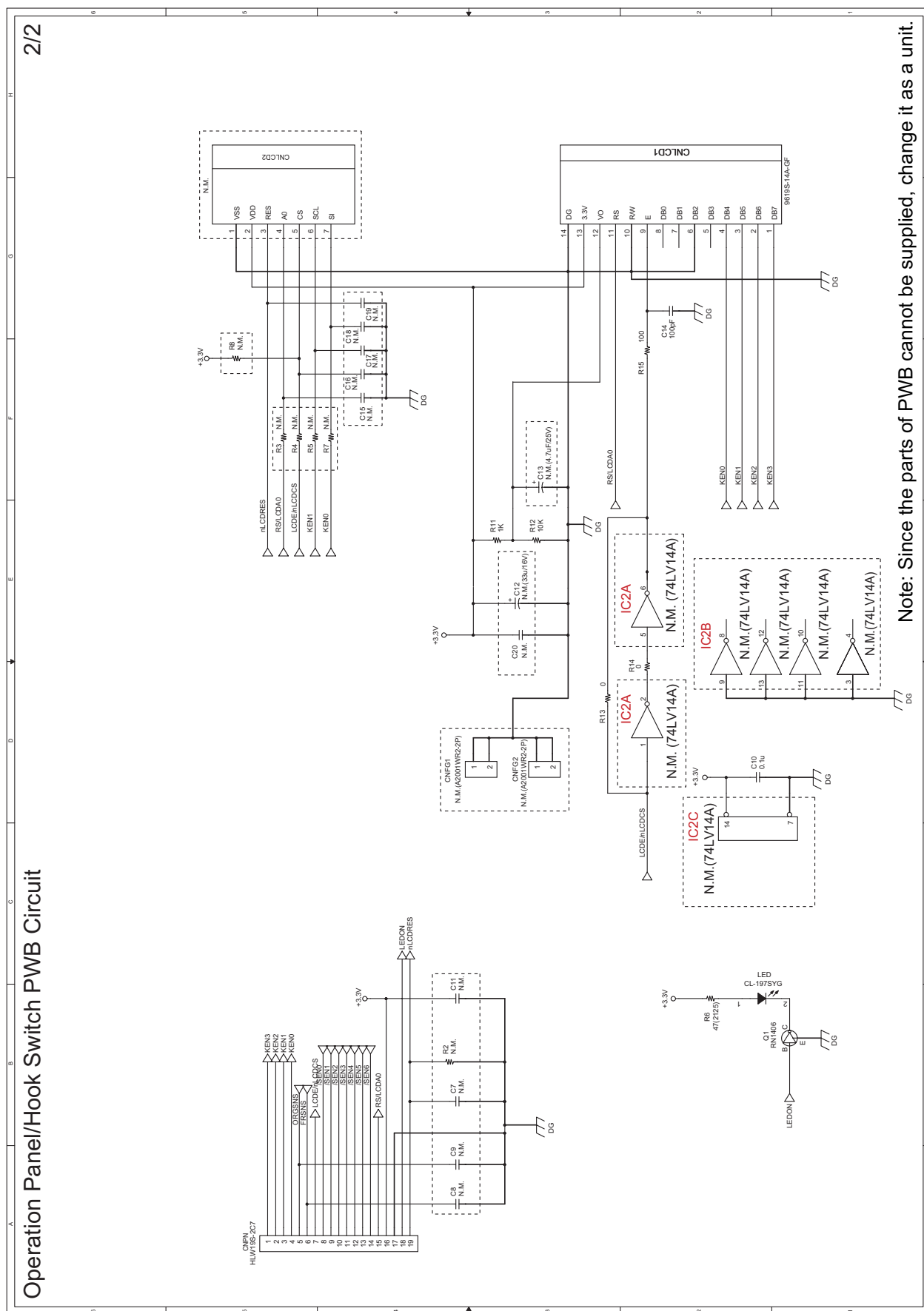


[4] Operation Panel/Hook Switch PWB circuit

1. Operation Panel/Hook Switch PWB circuit (1/2)

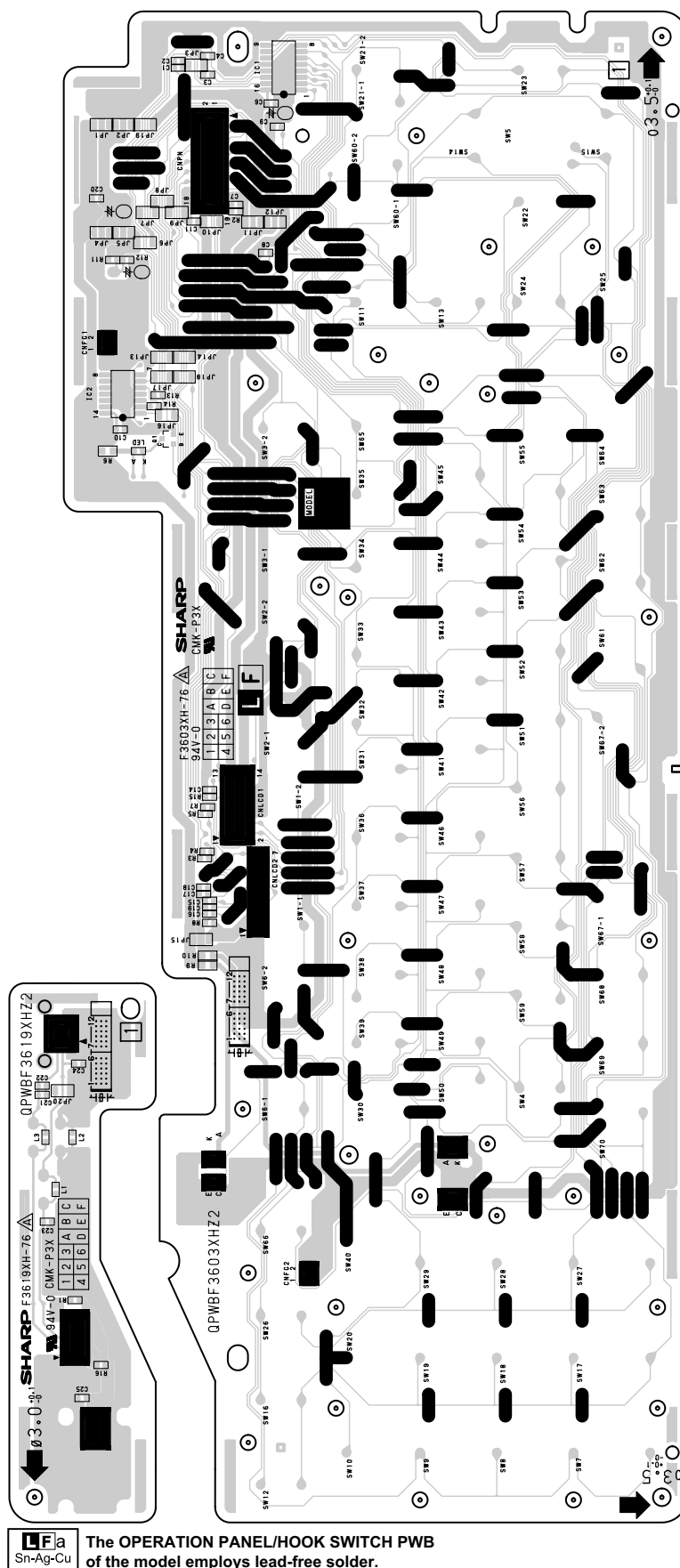


2. Operation Panel/Hook Switch PWB circuit (2/2)



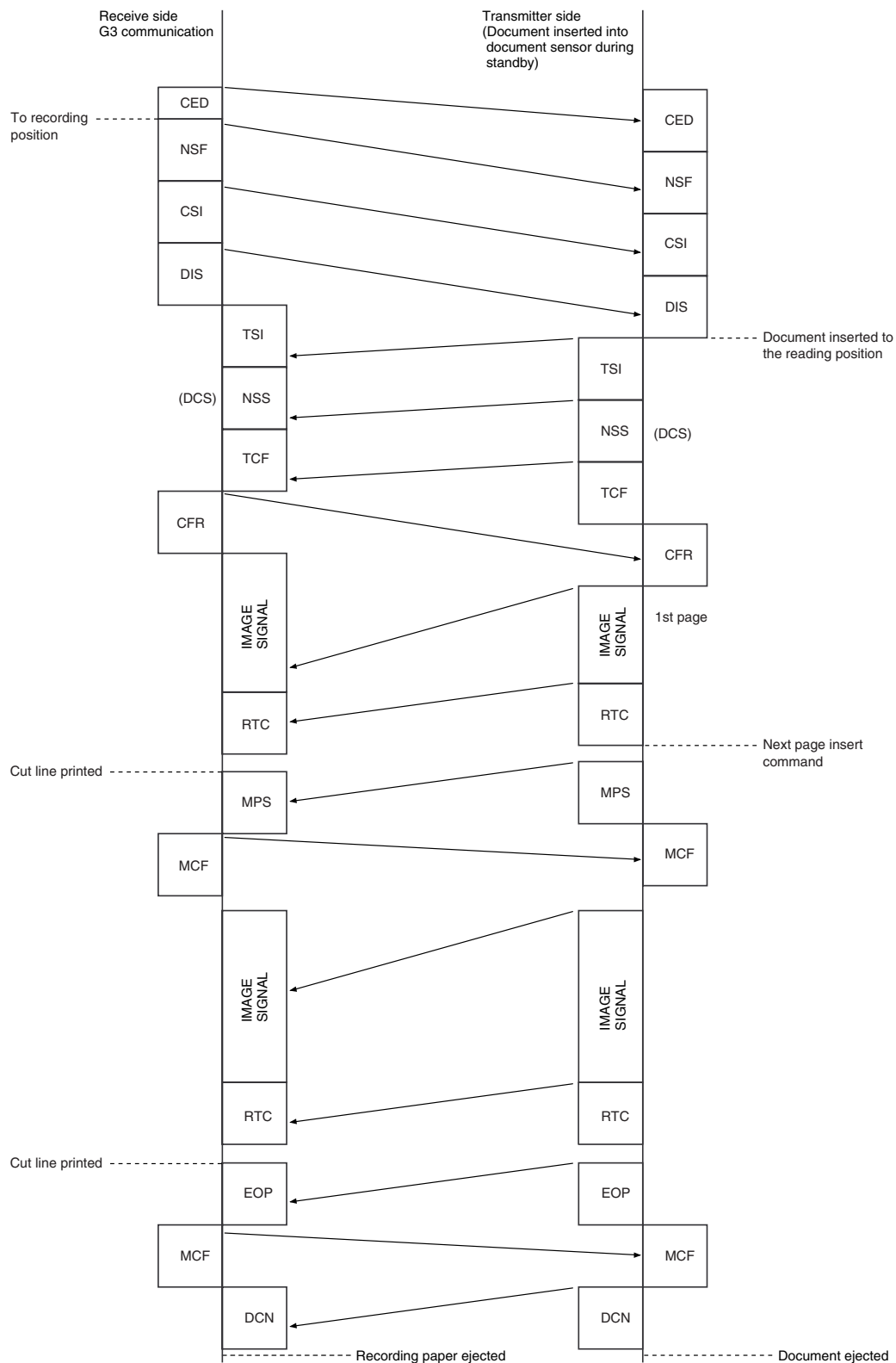
4. Operation Panel/Hook Switch PWB parts layout (Bottom side)

Note: Since the parts of PWB cannot be supplied, change it as a unit.

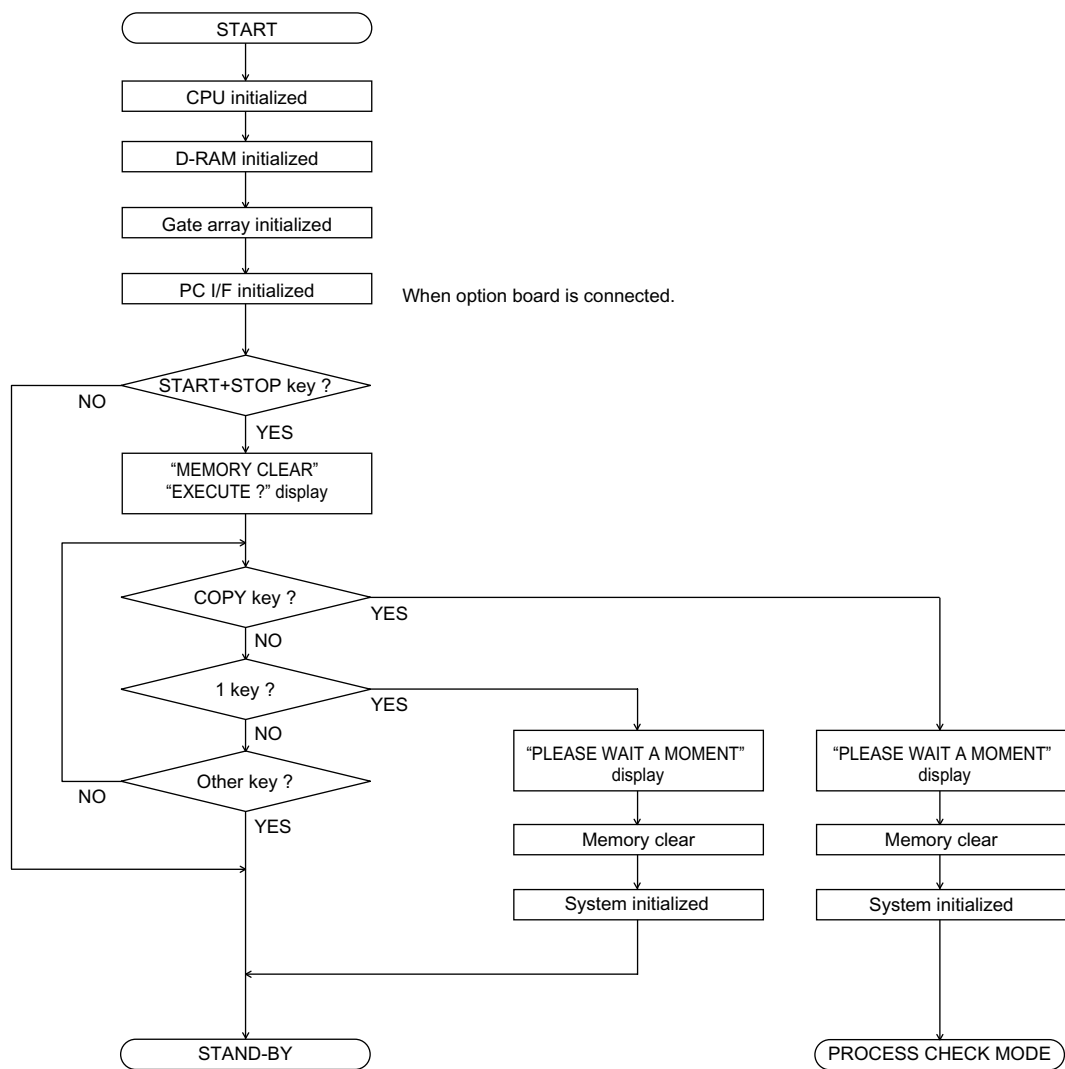


CHAPTER 7. OTHER

[1] Protocol



[2] Power on sequence

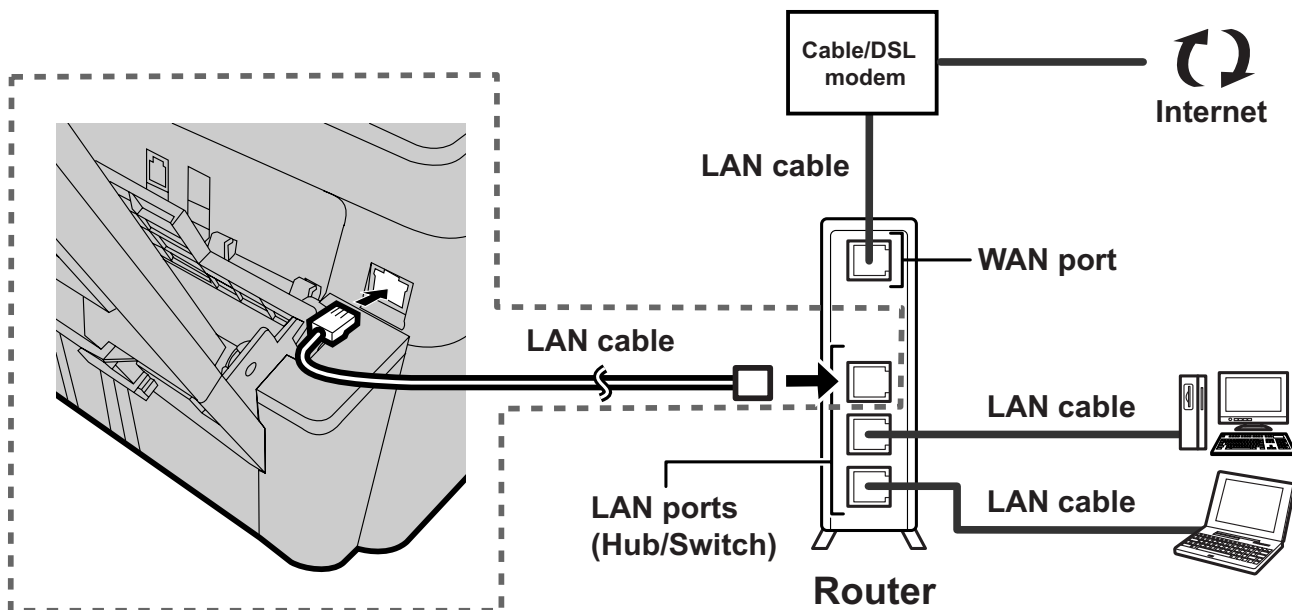


[3] Rewriting version up the FLASH ROM

1. Preparations

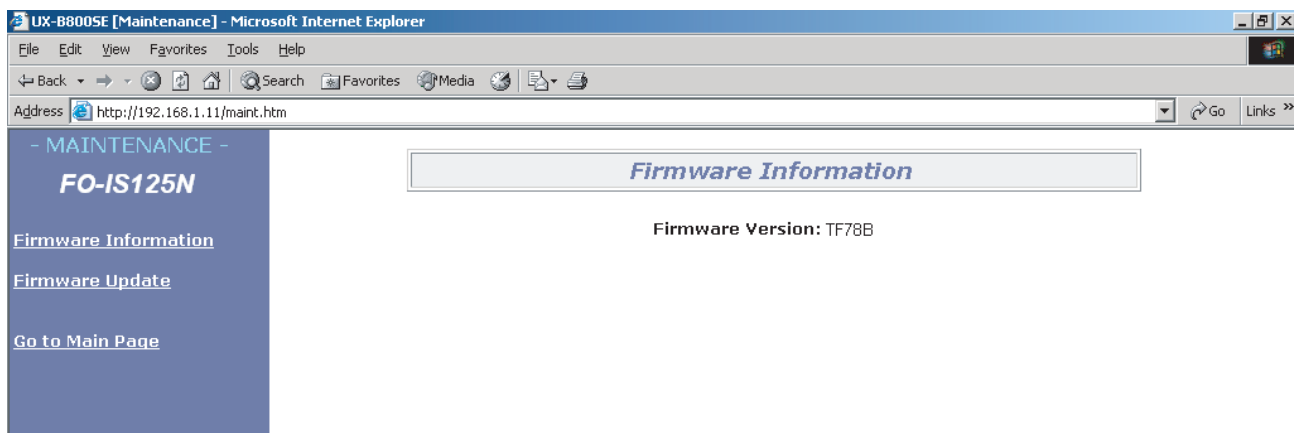
Before updating the firmware, please make sure that you can browse the embedded Web Page by input the device IP address into the URL box of the browser.

The example of connection is below:

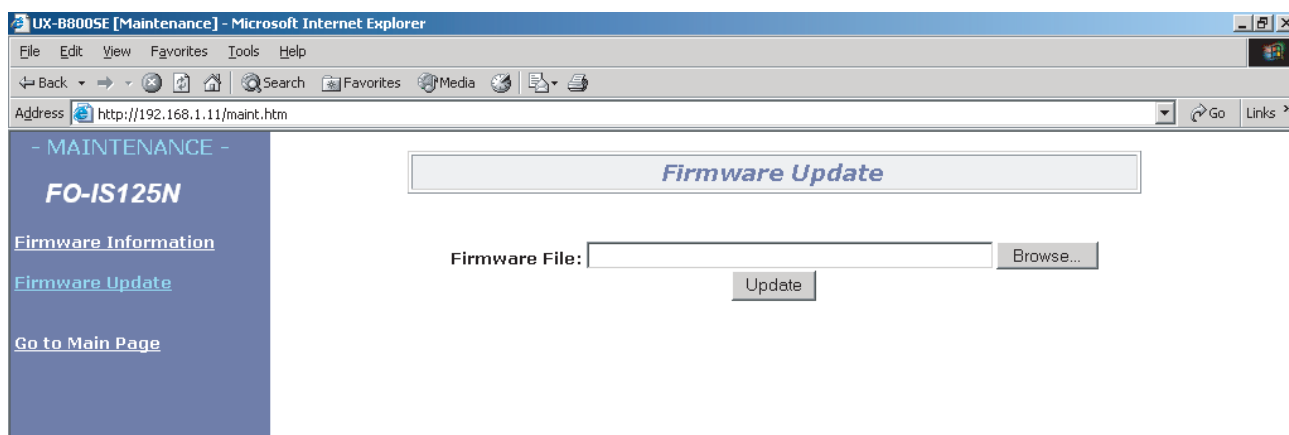


2. Operations

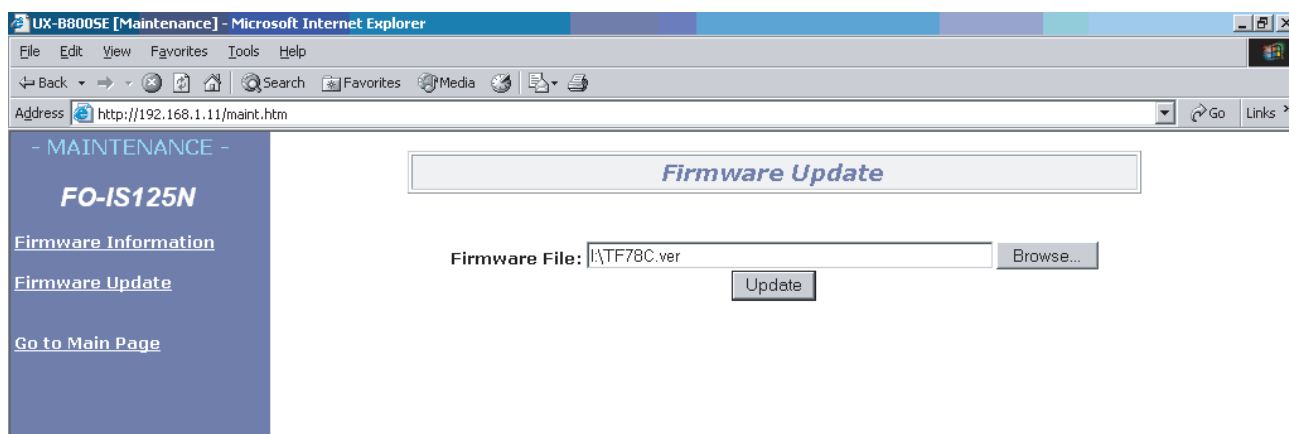
1. Press Function key, \times key, 8 key, 7 key and # key. "FIRMWARE VERSION UP" is displayed on the upper LCD.
Then press 2 key. "FIRMWARE UPDATE/PRESS START KEY" is displayed on the LCD.
Then press START key. "FIRMWARE UPDATE/WATING FOR DATA" is displayed on the LCD.
2. Open Web browser and enter <http://IP address of the machine/maint.htm> in the edit box for URL and press Enter key.
Then the below page will be shown.



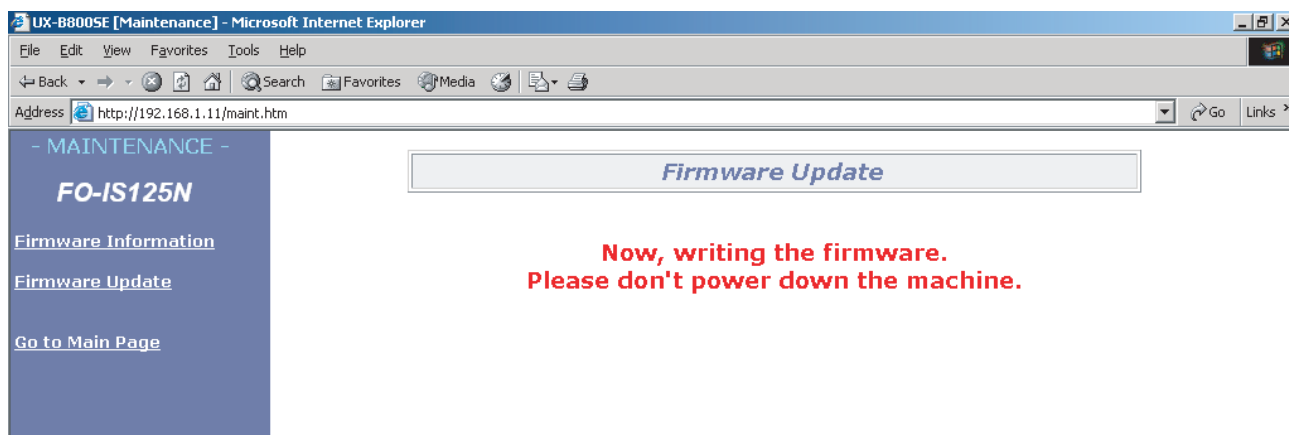
3. Click Firmware Update in the menu pane. Then the below page will be shown. If it says that the machine is not ready, please retry from step 1.



4. Click Browse button, choice the new firmware file and click Open button. Then the below page will b shown.

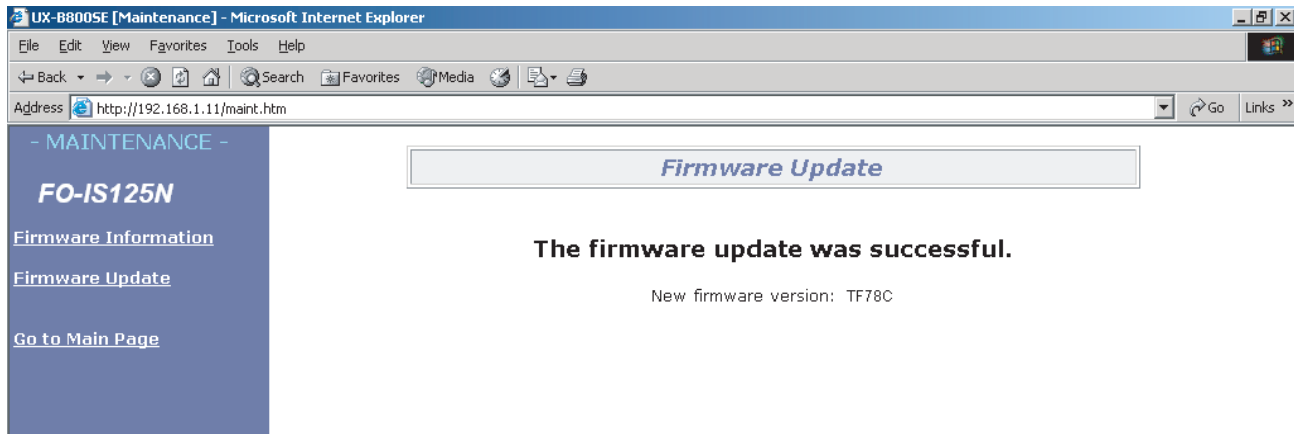


5. Click Update button. Then "DO NOT POWER DOWN!/UPDATING" is displayed on the LCD. A few minutes later, the below page will be shown.



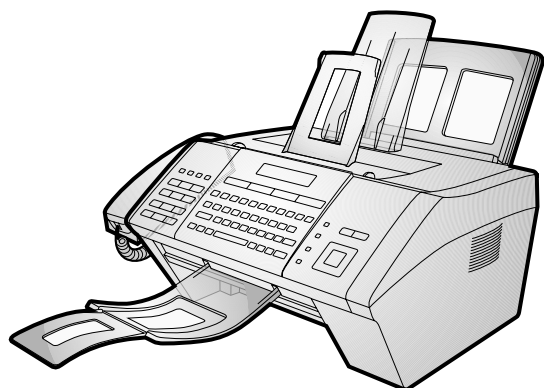
FO-IS125N

6. A few minutes later, the device will restart automatically.
7. After the machine restarts, the below page will be shown.



SHARP PARTS GUIDE

No. 00ZFIS125NSME



FACSIMILE MODEL FO-IS125N

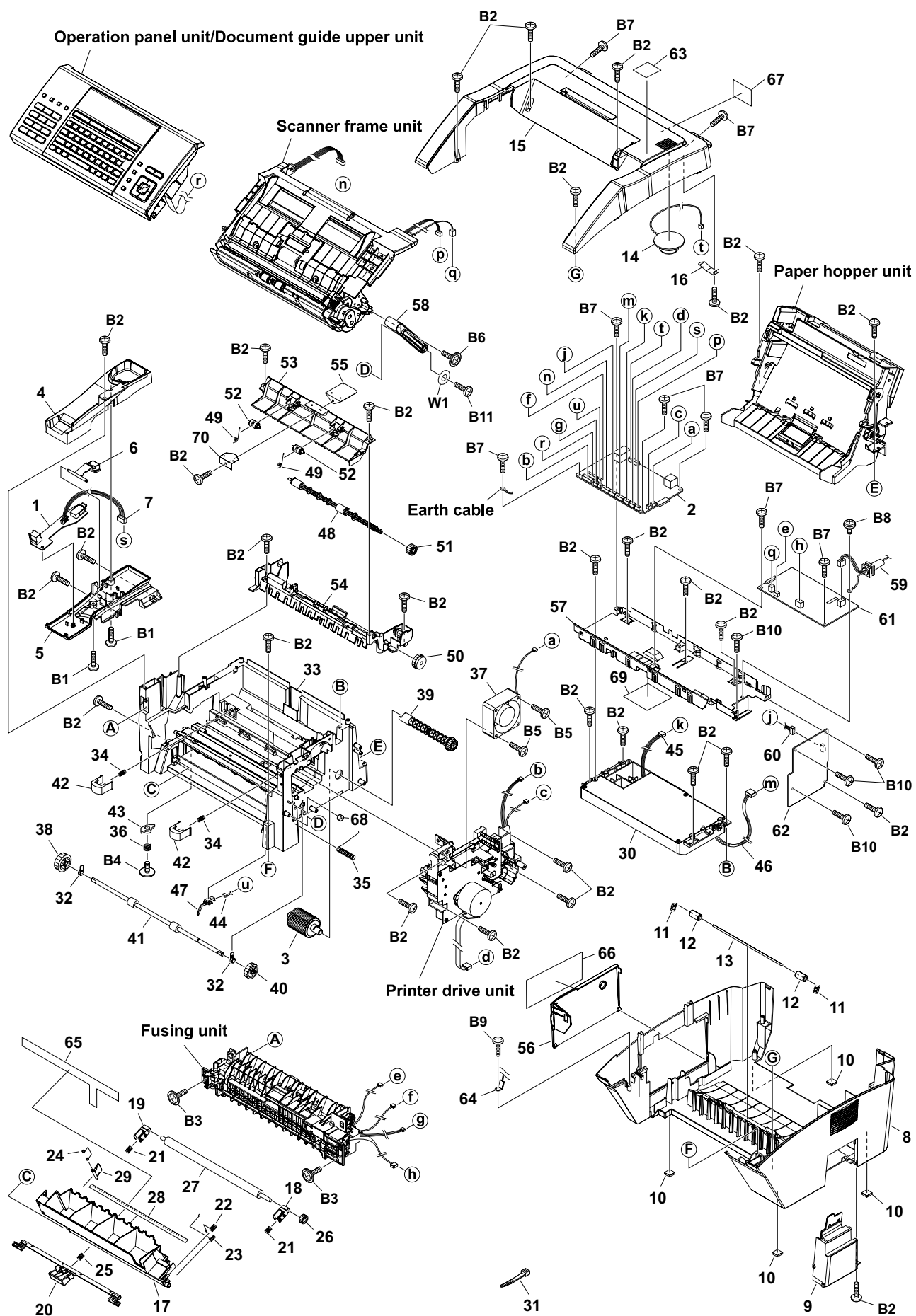
MODEL	SELECTION CODE	DESTINATION
FO-IS125N	U	U.S.A.

CONTENTS

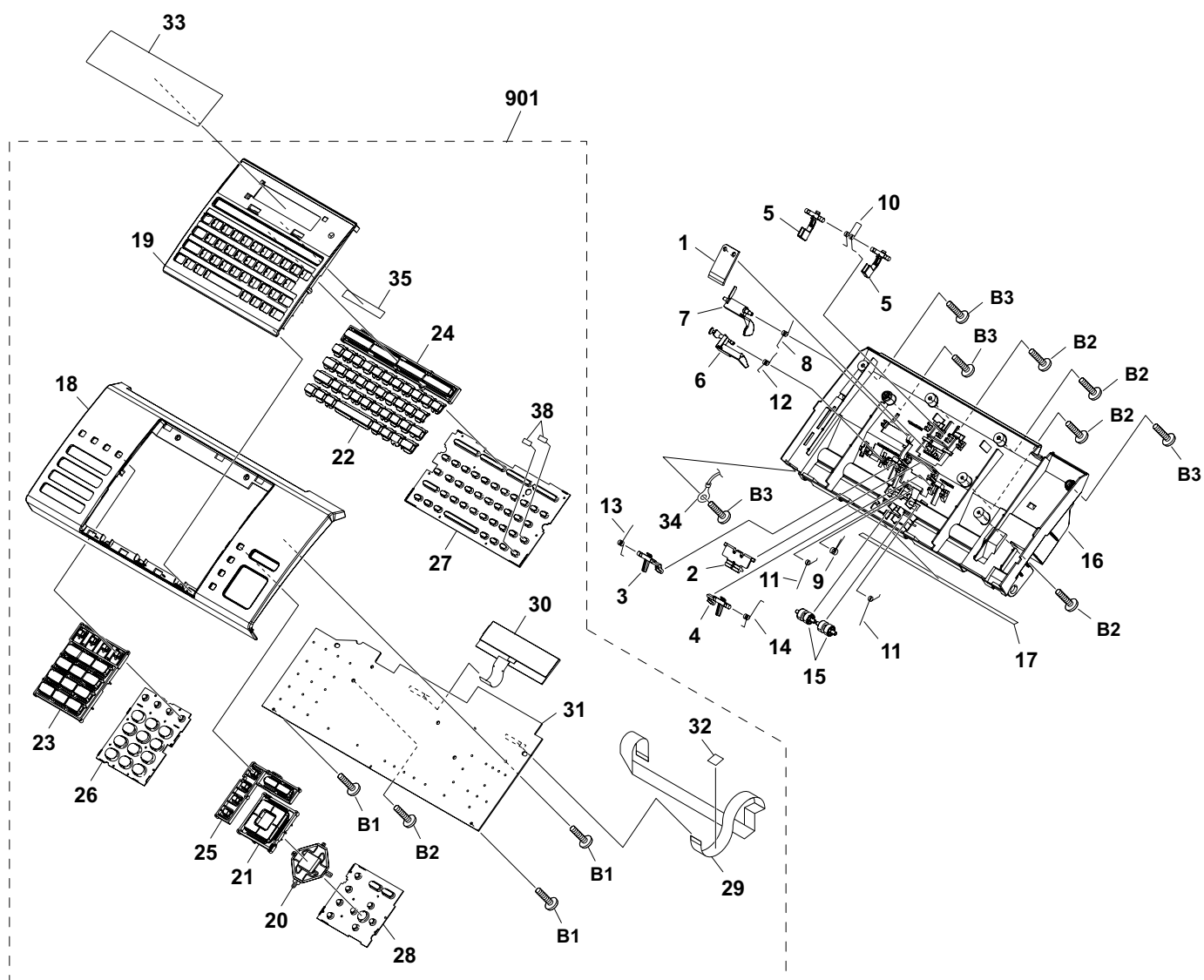
- | | |
|--|------------------------------------|
| [1] Cabinet, etc. | [7] Packing material & Accessories |
| [2] Operation panel unit/Document guide upper unit | [8] Control PWB unit |
| [3] Scanner frame unit | [9] Power supply PWB unit |
| [4] Paper happer unit | [10] High voltage PWB unit |
| [5] Printer drive unit | [11] Operation panel PWB unit |
| [6] Fusing unit | [12] Hook switch PWB unit |
| | ■ INDEX |

Parts marked with "▲" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

[1] Cabinet, etc.

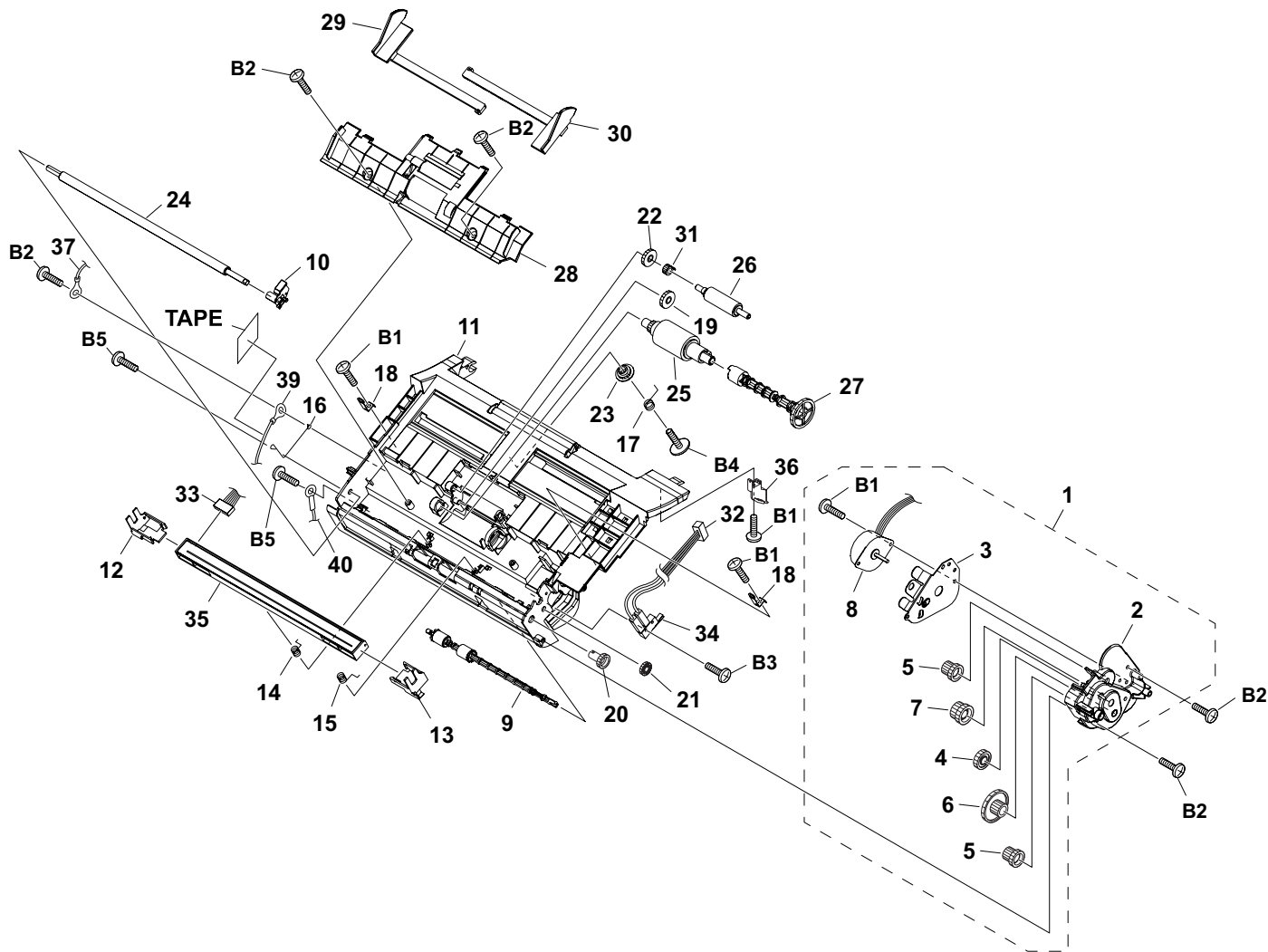


NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[1] Cabinet,etc.					
1	DCEKP420DXH01	AL	N	E	Hook switch PWB unit
2	DCEKC582XXH01	CA	N	E	Control PWB unit (within ROM)
3	CROLR2566XH01	AP	N	C	PU roller ass'y
4	GCABA2493XHSA	AM	N	C	Handset holder, top
5	GCABB2494XHSA	AH	N	C	Handset holder, bottom
6	MLEVP2441XHZA	AE	N	C	Hook switch lever
7	QCNWN307DXHZZ	AF	N	C	Hook switch cable
8	GCABB2495XHSA	BA	N	D	Bottom cabinet
9	GCOVA2566XHZZ	AL	N	C	Motor cover
10	GLEGG2089XHZZ	AE		C	Leg rubber
11	MSPRC3576XHZZ	AE		C	Pinch roller spring
12	NROLP2334XHZA	AC		C	Pinch roller
13	NSFTZ2402XHZA	AK		C	Pinch roller shaft
14	CCNWN346CXH01	AP		C	Speaker ass'y
15	GCABA2496XHSA	AY	N	D	Top cabinet
16	MSPRP3123XHZZ	AC		C	Speaker holder lever spring
17	GCOVA2565XHZZ	AY	N	C	Front cover
18	LHLDZ2295XHZZ	AE		C	Transfer roller holder, right
19	LHLDZ2296XHZA	AE	N	C	Transfer roller holder, left
20	MLEVP2442XHZZ	AE	N	C	Lock lever
21	MSPRC3522XHZZ	AD		C	Transfer spring
22	MSPRC3700XHZZ	AD	N	C	Transfer term spring
23	MSPRC3714XHZZ	AD	N	C	Transfer earth spring
24	MSPRD3550XHZZ	AE		C	Left cover stopper spring
25	MSPRD3701XHZZ	AC	N	C	Lock lever spring
26	NGERH2677XHZZ	AE	N	C	PTR gear
27	NROLR2565XHZZ	AY	N	C	Transfer roller
28	PBRs-2083XHZZ	AP	N	C	Transfer brush
29	PGiDM2702XHZZ	AE		C	Left cover stopper
30	DUNTK425DXHZZ	BT	N	E	Optical unit (LSU)
31	LBJNDJ2006XHZZ	AA		C	Band (100mm)
32	LBSP2161XHZZ	AE		C	Regist roller bearing
33	LFRM-2287XHZZ	BA	N	C	Printer frame
34	MSPRC3590XHZZ	AE		C	DV press spring
35	MSPRC3698XHZZ	AD	N	C	Regist earth spring
36	MSPRD3545XHZZ	AE		C	TC stopper spring
37	NFANP2005XHZZ	AY		B	Fan
38	NGERH2746XHZZ	AD	N	C	Release gear
39	NGERH2747XHZZ	AE	N	C	PU gear
40	NGERH2748XHZZ	AD	N	C	Regist gear
41	NROLR2564XHZZ	AP	N	C	Regist roller
42	PGiDM2687XHZZ	AE		C	DV press guide
43	PGiDM2688XHZZ	AE		C	TC stopper
44	QCNWN310DXHZZ	AF	N	C	P-IN sensor cable
45	QCNWN314DXHZZ	AH	N	C	Optical unit cable (CNLSR)
46	QCNWN315DXHZZ	AH	N	C	Optical unit cable (CNPM)
47	QSW-B2307SCZA	AG	N	C	P-IN sensor
48	CROLR2567XH01	AP	N	C	PO roller ass'y
49	MSPRD3699XHZZ	AD	N	C	Pinch roller spring
50	NGERH2466XHZZ	AE		C	Idler gear, 32Z
51	NGERH2749XHZZ	AD	N	C	PO roller gear
52	NROLP2332XHZA	AL		C	Pinch roller
53	PGiDM2744XHZZ	AP	N	C	Exit guide lower
54	PGiDM2745XHZZ	AL	N	C	Exit guide upper
55	PRDAR2081XHZZ	AF	N	C	Radiation sheet
56	GCOVA2567XHZZ	AL	N	C	Left cover
57	LPLTM3477XHZZ	AQ	N	C	PWB plate
58	MARMP2051XHZZ	AE	N	C	Stop arm
59	QACCD2107XHZZ	AQ	N	E	AC cord ass'y
60	QCNWN308DXHZZ	AF	N	C	High voltage cable
61	RDENT2237XHZZ	BH	N	E	Power supply PWB unit
62	RDENT2239XHZZ	BF	N	E	High voltage PWB unit
63	TLABH719KXHZZ	AE	N	D	Stack label
64	PWiR-2038XHZZ	AQ	N	C	Stop wire
65	PBRs-2084XHZZ	AM	N	C	TR brush B
66	TLABH871KXHZZ	AF	N	D	Left cover label
67	TLABS870KXHZZ	AD	N	D	Caution label
68	PGUMM2225XHZZ	AG		C	Damper rubber
69	PSHEP4002XHZZ	AE	N	C	Protection sheet
70	PSHEP3997XHZZ	AE	N	C	Exit guide sheet
B1	XEBS730P08000	AC		C	Screw (3x8)
B2	XEBS730P10000	AC		C	Screw (3x10)
B3	LX-BZ2321XHZZ	AE		C	Screw (3x12)
B4	LX-BZ2327XHZZ	AF		C	Screw (Special)
B5	XEBS730P34000	AD	N	C	Screw (3x34)
B6	LX-BZ2222XHZZ	AD		C	Screw (3x10)
B7	XHBS730P08000	AB		C	Screw (3x8)
B8	LX-BZ2282XHZZ	AE	N	C	Screw (4x6)
B9	XEBS726P08000	AE	N	C	Screw (2.6x8)
B10	XHBS730P06000	AC		C	Screw (3x6)
B11	XEBS730P12000	AC		C	Screw (3x12)
W1	XWHS740-08100	AA		C	Washer

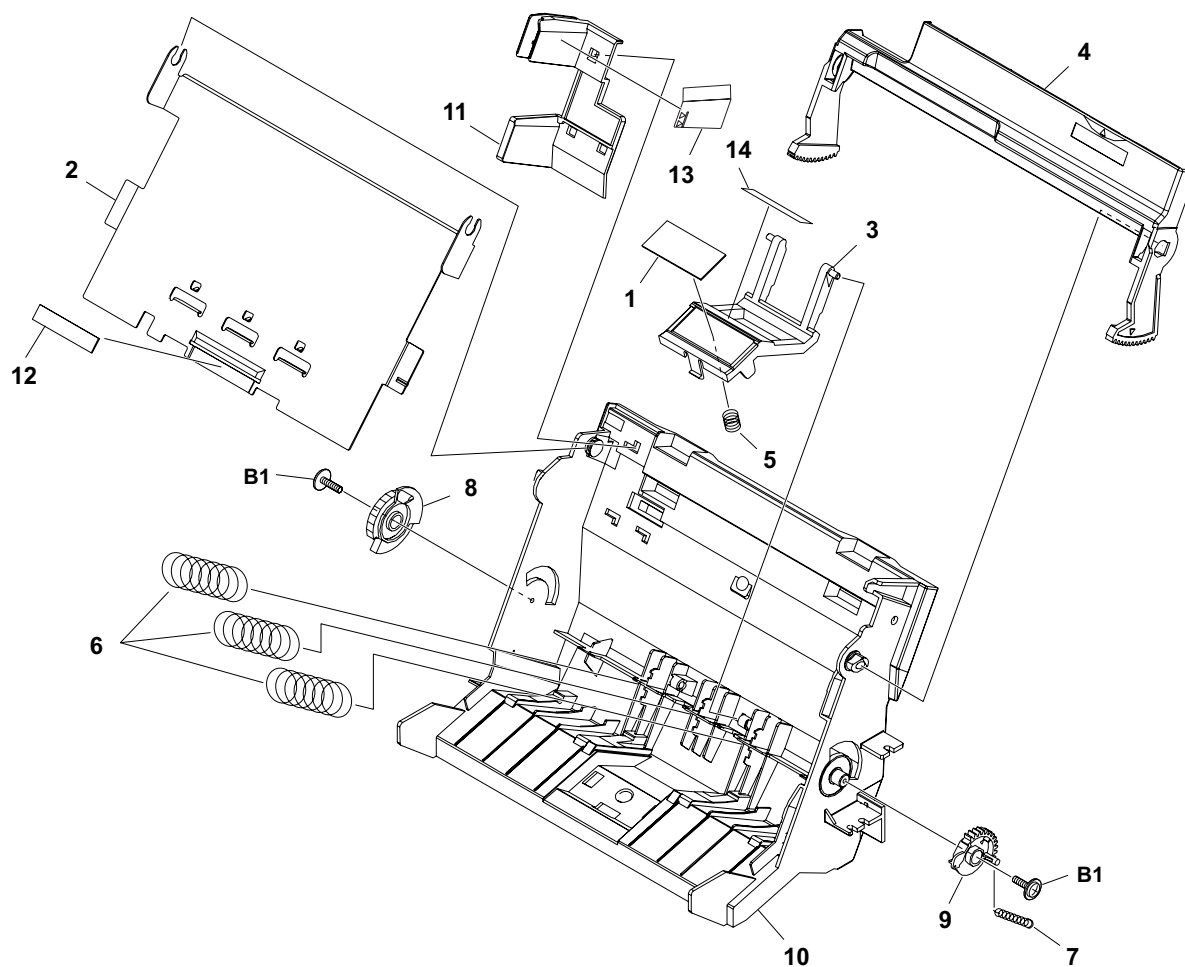
[2] Operation panel unit/Document guide upper unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[2] Operation panel unit/Document guide upper unit					
1	LPLTG3469XHZZ	AL	N	C	Separate rubber
2	LPLTP3175XHZA	AD	N	C	Separate plate
3	LPLTP3257XHZL	AE		C	Sub feed plate,left
4	LPLTP3257XHZR	AE		C	Sub feed plate,right
5	LPLTP3492XHZZ	AE	N	C	Feed plate
6	MLEVP2444XHZZ	AE	N	C	Original sensor lever
7	MLEVP2445XHZZ	AE	N	C	Front sensor lever
8	MSPRD3632XHZZ	AE		C	Front sensor lever spring
9	MSPRD3685XHZZ	AD	N	C	Separate spring
10	MSPRD3399XHZZ	AE	N	C	Send feed spring
11	MSPRD3687XHZZ	AC	N	C	PO pinch roller spring
12	MSPRD3704XHZZ	AC	N	C	Original sensor lever spring
13	MSPRD3721XHZZ	AD	N	C	Sub feed spring, left
14	MSPRD3722XHZZ	AD	N	C	Sub feed spring, right
15	NROLP2332XHZA	AL		C	Pinch roller
16	PGIDM2740XHZZ	AM	N	C	Document guide upper
17	PBR5-2086XHZZ	AG	N	C	Static brush
18	GCASP2204XHZZ	AS	N	D	Panel case
19	GCASP2205XHZZ	AM	N	D	Sub panel case
20	JBTN-2538XHSD	AF	N	C	Start key
21	JBTN-2541XHSD	AH	N	C	Cursor key
22	JBTN-2544XHSD	AQ	N	C	Qwerty key
23	JBTN-2607XHSA	AL	N	C	12 key
24	JBTN-2608XHSA	AM	N	C	Function key
25	JBTN-2609XHSA	AM	N	C	Copy key
26	QCNTM2062XHZZ	AM	N	C	12 key rubber
27	QCNTM2063XHZZ	AQ	N	C	Qwerty key rubber
28	QCNTM2064XHZZ	AL	N	C	Copy key rubber
29	QCWN306DXHZZ	AQ	N	C	Panel cable
30	RLCUB2011XHZZ	BA	N	B	LCD unit
31	DCEKP418DXH01	BA	N	E	Operation panel PWB unit
32	PTPEH2149XHZZ	AD	N	C	Double tape
33	HPNLH2472XHSA	AL	N	D	Decoration panel
34	QCWN365CXHZZ	AD	N	C	Earth cable
35	PSPO-2029XHZZ	AD	N	C	LCD sponge
38	PSHEP4001XHZZ	AC	N	C	Qwerty rubber sheet
B1	XEBS720P06000	AC		C	Screw (2x6)
B2	XEBS726P08000	AE		C	Screw (2.6x8)
B3	XEBS730P10000	AC		C	Screw (3x10)
	(Unit)				
901	CCASP2204XH01	BS	N	E	Operation panel unit

[3] Scanner frame unit

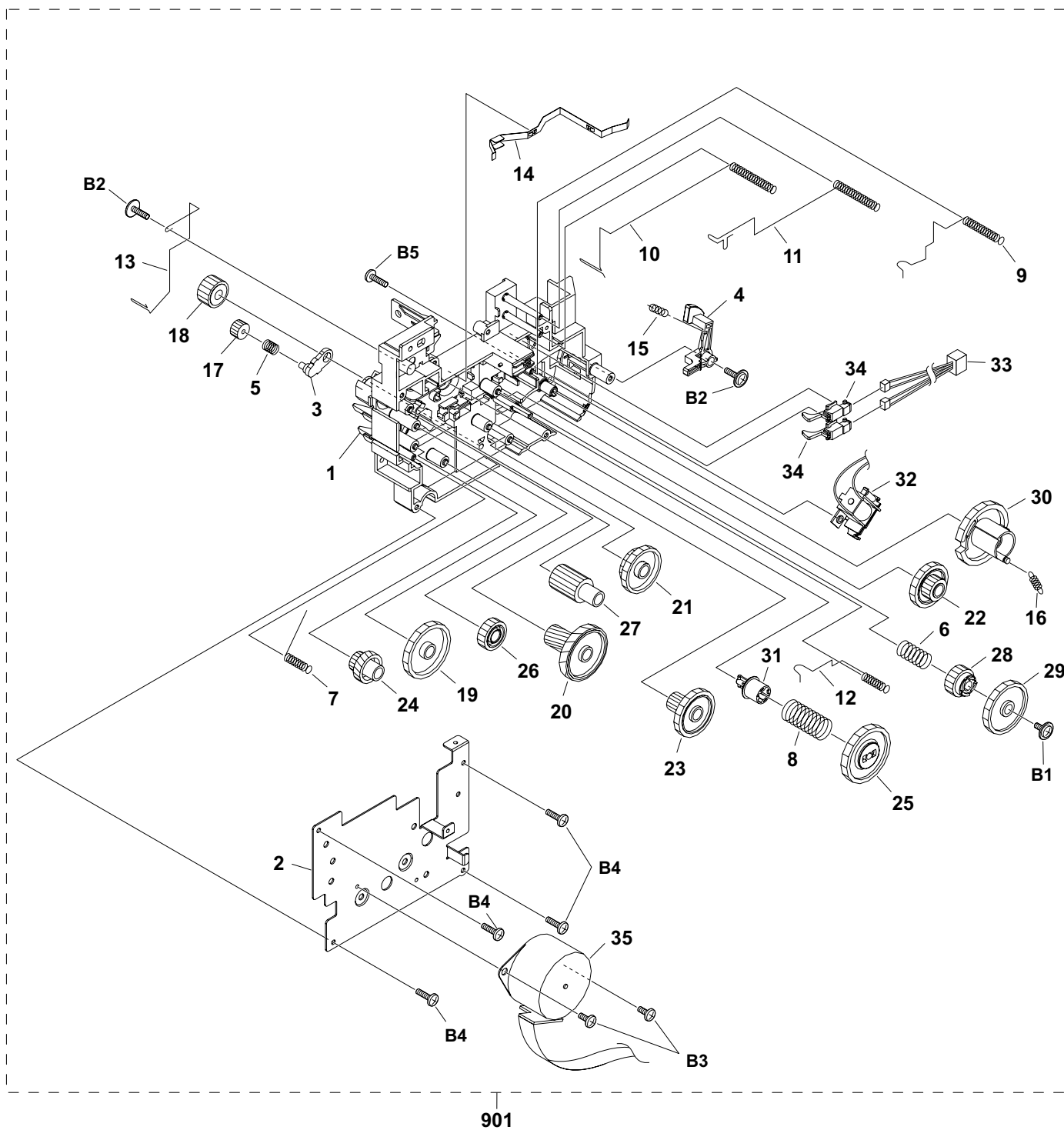


NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] Scanner frame unit					
1	CFRM-2285XH01	AZ	N	E	TX drive frame unit
2	LFRM-2285XHZZ	AH	N	C	TX drive frame
3	LPLTM3470XHZZ	AF	N	C	Radiator plate
4	NGERH2639XHZZ	AF		C	Reduction gear,16/28Z
5	NGERH2702XHZZ	AH		C	Reduction gear,19/25Z
6	NGERH2718XHZZ	AP		C	Reduction gear,20/77Z
7	NGERH2720XHZZ	AP		C	Reduction gear,25/30Z
8	RMOTS2213XHZZ	AV	N	B	Scanner motor
9	CROLP2499XH01	AM		C	Exit roller ass'y
10	LBSHP2174XHZZ	AE	N	C	Back roller bearing
11	LFRM-2284XHZZ	BA	N	C	Scanner frame
12	LHLDZ2322XHZA	AE	N	C	CIS holder, left
13	LHLDZ2323XHZZ	AK		C	CIS holder, right
14	MSPRC3742XHZZ	AD		C	CIS spring, left
15	MSPRC3743XHZZ	AD		C	CIS spring, right
16	MSPRC3689XHZZ	AE	N	C	Earth spring
17	MSPRC3725XHZZ	AD	N	C	Pinion gear spring
18	MSPRP2717XHZZ	AF	N	C	Panel lock lever spring
19	NGERH2410XHZZ	AB		C	Idler gear,28Z
20	NGERH2636XHZZ	AF		C	Document PO gear,21Z
21	NGERH2641XHZZ	AE		C	Back gear,19Z
22	NGERH2734XHZZ	AD	N	C	Send roller gear
23	NGERP2318XHZZ	AD		C	Pinion gear
24	NROLR2549XHZZ	AU		C	Back roller
25	NROLR2562XHZZ	AL	N	C	Feed roller
26	NROLR2563XHZZ	AH	N	C	Send roller
27	NSFTP2394XHZZ	AF		C	Feed roller shaft
28	PGIDM2741XHZZ	AG	N	C	Document guide lower
29	PGIDM2742XHZZ	AE	N	C	Hopper guide, left
30	PGIDM2743XHZZ	AE	N	C	Hopper guide, right
31	PSPAZ2309XHZZ	AD	N	C	Send roller spacer
32	QCNWN309DXHZZ	AL	N	C	Interlock switch cable
33	QCNWN313DXHZZ	AH	N	C	CIS cable
34	QSW-M2343XHZZ	AN		C	Interlock switch
35	RUNTZ2147XHZZ	BM		B	CIS
36	LPLTP3493XHZZ	AD	N	C	Scanner R plate
37	QCNWN320DXHZZ	AF	N	C	Earth cable
39	QCNWN365CXHZZ	AD	N	C	Earth cable
40	PWIR-2038XHZZ	AQ	N	C	Stop wire
B1	XEBS730P10000	AC		C	Screw (3x10)
B2	LX-BZ2222XHZZ	AD		C	Screw (3x10)
B3	XEBS720P10000	AE		C	Screw (2x10)
B4	LX-BZ2205XHZZ	AE		C	Screw
B5	XEBS726P08000	AE		C	Screw (2.6x8)

[4] Paper happer unit

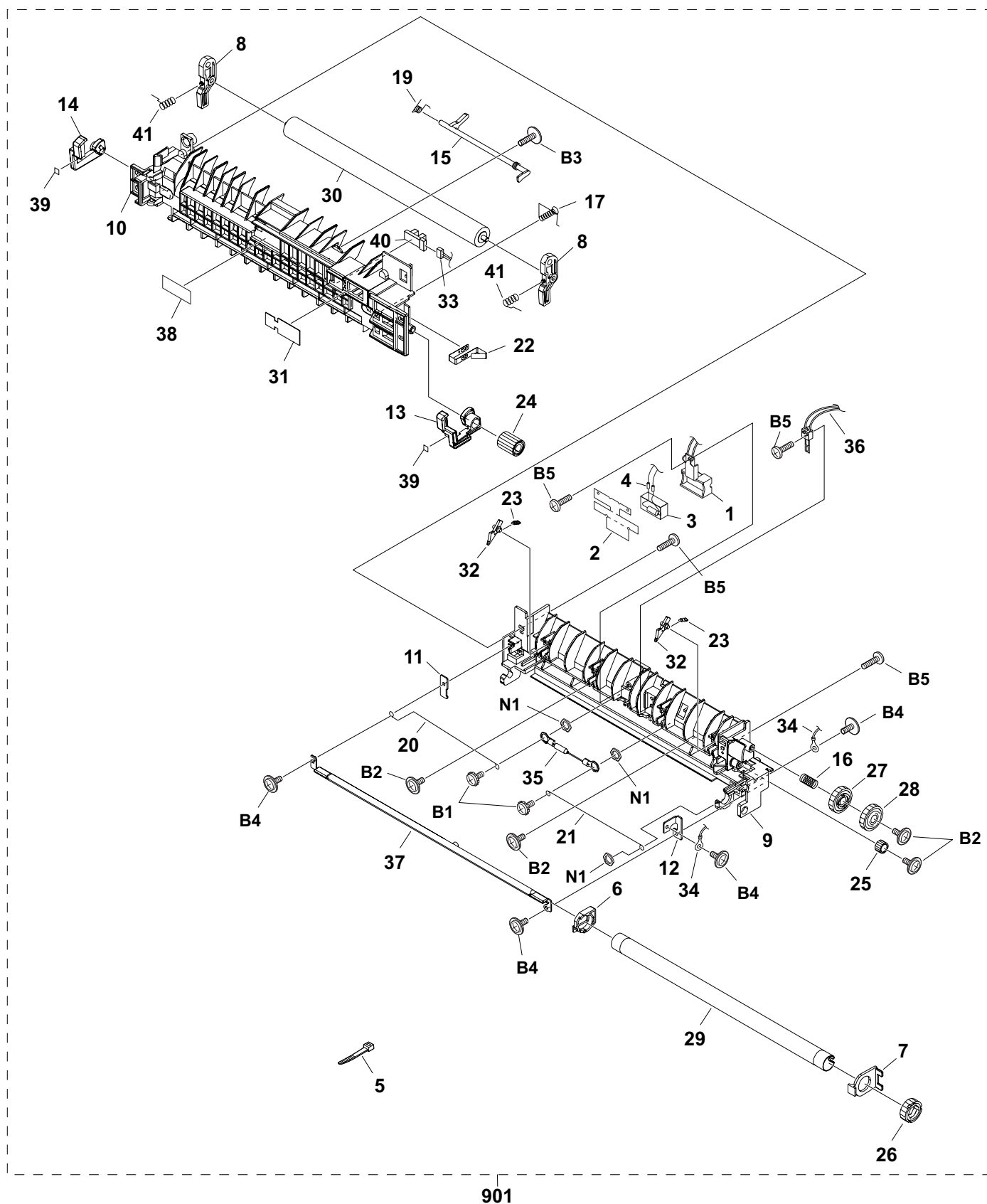
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[4] Paper happer unit					
1	LPLTG3476XHZZ	AQ	N	C	Separate pad
2	LPLTM2924XHFW	AQ	N	C	Rotation plate
3	LPLTP3475XHZZ	AE	N	C	Separate plate
4	LPLTP3483XHZZ	AP	N	C	Release plate
5	MSPRC3702XHZZ	AC	N	C	Separate spring
6	MSPRC3703XHZZ	AD	N	C	Coil spring
7	MSPRT3718XHZZ	AD	N	C	RP release spring
8	NGERH2365AXZZ	AD	N	C	RP release gear, left
9	NGERH2754XHZZ	AE	N	C	RP release gear, right
10	PGiDM2746XHZZ	AV	N	C	Paper hopper
11	PGiDM2747XHZZ	AF	N	C	A4 paper guide
12	PSEL-2015XHZZ	AB	N	C	Paper pad
13	TLABH717KXHZZ	AE	N	D	Paper limit label
14	PSHEP3988XHZZ	AD	N	C	Separate sheet
B1	LX-BZ2222XHZZ	AD	N	C	Screw (3x10)

[5] Printer drive unit



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[5] Printer drive unit					
1	LFRM-2286XHZZ	AW	N	C	Printer drive frame
2	LPLTM3471XHZZ	AQ	N	C	Printer drive bracket
3	MLEVP2409XHZZ	AE		C	Planet lever B
4	MLEVP2446XHZZ	AE	N	C	ASF release lever
5	MSPRC2735XHZZ	AC		C	Planet gear spring
6	MSPRC3528XHZZ	AE		C	Latch gear spring
7	MSPRC3690XHZZ	AD	N	C	OPC earth spring
8	MSPRC3691XHZZ	AD	N	C	Coupling spring
9	MSPRC3692XHZZ	AD	N	C	DV terminal spring
10	MSPRC3694XHZZ	AF	N	C	FU earth spring
11	MSPRC3695XHZZ	AF	N	C	TC terminal spring
12	MSPRC3696XHZZ	AD	N	C	SV terminal spring
13	MSPRC3697XHZZ	AD	N	C	TC earth spring
14	MSPRP3693XHZZ	AF	N	C	MC terminal spring
15	MSPRT3712XHZZ	AC	N	C	RP lever spring
16	MSPRT3713XHZZ	AD	N	C	Clutch spring
17	NGERH2458XHZZ	AB		C	Planet gear
18	NGERH2670XHZZ	AE		C	Sun gear
19	NGERH2735XHZZ	AE	N	C	Reduction gear, 73/19Z
20	NGERH2736XHZZ	AE	N	C	Reduction gear, 52/15Z
21	NGERH2737XHZZ	AD	N	C	Reduction gear, 60/28Z
22	NGERH2738XHZZ	AD	N	C	Reduction gear, 37/18Z
23	NGERH2739XHZZ	AD	N	C	Reduction gear, 40/19Z
24	NGERH2742XHZZ	AD	N	C	Reduction gear, 31/15Z
25	NGERH2743XHZZ	AD	N	C	Coupling gear
26	NGERH2744XHZZ	AD	N	C	Idler gear, 24Z
27	NGERH2745XHZZ	AD	N	C	Idler gear, 20Z
28	NGERH2755XHZZ	AD	N	C	Latch gear, 29Z
29	NGERH2756XHZZ	AD	N	C	Latch gear, 60Z
30	NGERH2757XHZZ	AE	N	C	Reduction gear, 43/26Z
31	NSFTP2422XHZZ	AD	N	C	Coupling shaft
32	PMAGE2056XHZZ	AQ	N	B	Solenoid
33	QCNWN317DXHZZ	AF	N	C	Toner sensor cable
34	QSW-Z2237XHZB	AL		C	Toner sensor
35	RMOTS2214XHZZ	BA	N	B	Printer motor
B1	LX-BZ2138XHZZ	AD		C	Screw
B2	LX-BZ2222XHZZ	AD		C	Screw (3x10)
B3	LX-BZ2241XHZZ	AD		C	Screw
B4	XEBS730P10000	AC		C	Screw (3x10)
B5	XHBS730P08000	AB		C	Screw (3x8)
	(Unit)				
901	CFRM-2286XH01	BM	N	E	Printer drive unit

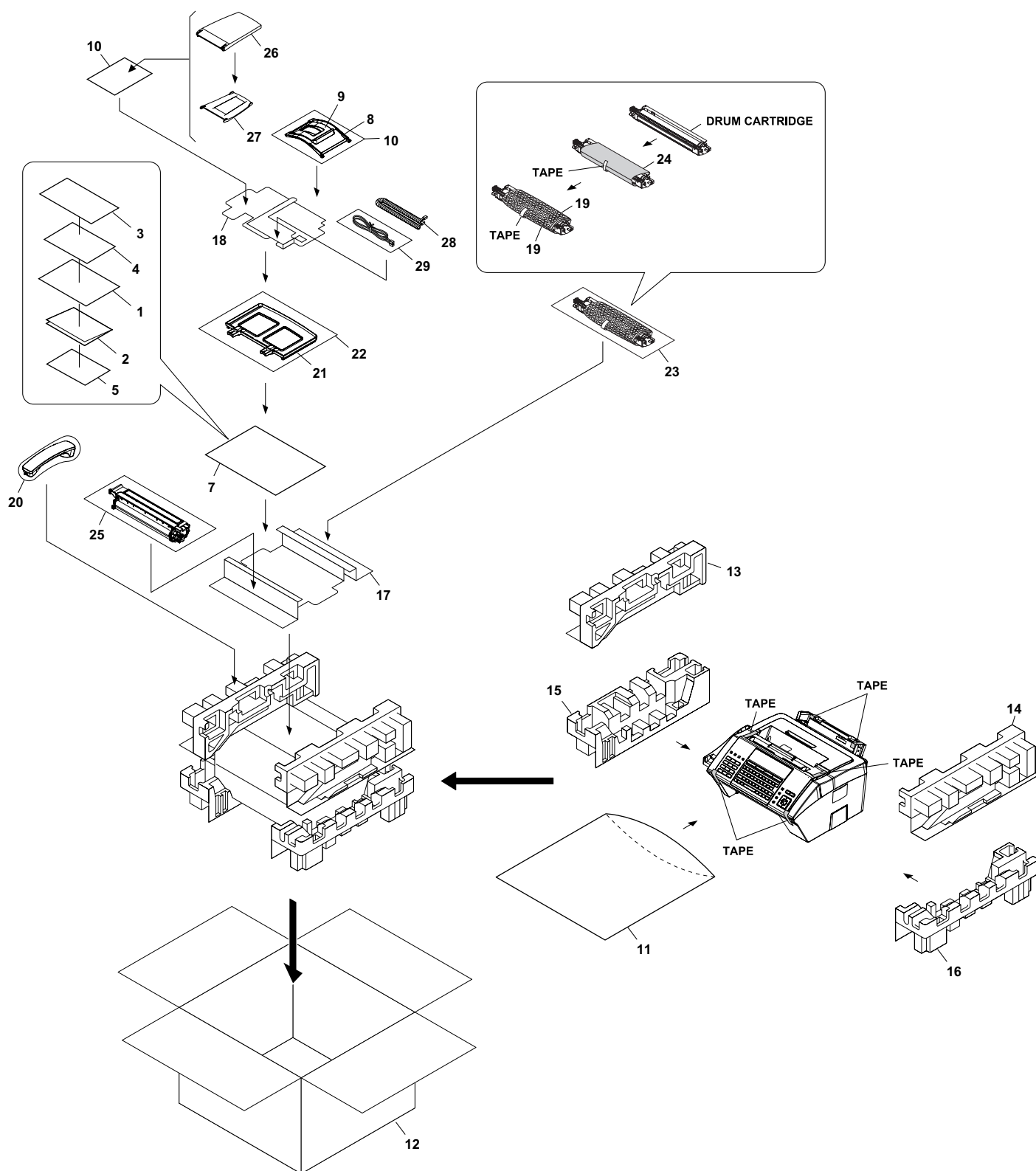
[6] Fusing unit



901

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[6] Fusing unit					
1	LHLDZ2297XHZZ	AE		C	Fuse holder
2	PSHEP3853XHZZ	AG		C	Fuse sheet
3	PSPO-2024XHZZ	AG		C	Fuse sponge
4	QFS-T2027XHZZ	AQ	N	A	Fuse-2
5	LBJDZ2006XHZZ	AA		C	Band (100mm)
6	LBSHP2162XHZZ	AE		C	Heat roller bearing 1
7	LBSHP2167XHZZ	AK		C	Heat roller bearing 2
8	LBSHP2168XHZZ	AE		C	FU bearing
9	LFRM-2265XHZZ	AU		C	FU frame, rear
10	LFRM-2266XHZZ	AV		C	FU frame, front
11	LPLTP3348XHZZ	AG		C	FU terminal
12	LPLTP3376XHZZ	AK		C	FU AC terminal
13	MLEVP2411XHZZ	AF		C	FU release lever, right
14	MLEVP2412XHZZ	AF		C	FU release lever, left
15	MLEVP2413XHZZ	AF		C	FU sensor lever
16	MSPRC3528XHZZ	AE		C	Ratchet gear spring
17	MSPRC3531XHZZ	AE		C	FU earth spring
19	MSPRD3529XHZZ	AE		C	FU sensor lever spring
20	MSPRK3549XHZZ	AF		C	Fuse bar 1
21	MSPRK3590XHZZ	AE		C	Fuse bar 2
22	MSPRP3535XHZZ	AE		C	Earth spring
23	MSPRT3594XHZZ	AE		C	Separating pawl spring
24	NGERH2576XHZA	AF		C	Idler gear, 21Z
25	NGERH2582XHZA	AD		C	Idler gear, 15Z
26	NGERH2678XHZA	AG		C	Heat roller gear
27	NGERH2679XHZZ	AE		C	Idler gear, 27Z
28	NGERH2680XHZZ	AE		C	Idler gear, 28Z
29	NROLP2536XHZZ	BD		C	Heat roller
30	NROLR2539XHZZ	BD		C	FU roller
31	PSHEZ3864XHZZ	AG		C	Photo sheet
32	PTME-2081XHZZ	AF		C	Separating pawl
33	QCNWN312DXHZZ	AF	N	C	Paper out sensor cable
34	QCNWN316DXHZZ	AH	N	C	FU AC cord
35	QFS-T2019XHZZ	AQ		A	Fuse-1
36	RDTCT2002XHZZ	AS	N	B	Thermistor
37	RLMPU2015XHZA	BE		B	Heater
38	TCAUH2041XHZZ	AG		D	Heat caution
39	TLABH351JXHZZ	AD		D	FU release label
40	VHPSG2482A+-1	AN		B	Photo sensor
41	MSPRC3530XHZZ	AD		C	FU pinch spring
B1	LX-BZ0956XHZZ	AE		C	Screw
B2	LX-BZ2138XHZZ	AD		C	Screw
B3	LX-BZ2222XHZZ	AD		C	Screw (3x10)
B4	XBPS730P08KS0	AB		C	Screw (3x8)
B5	XEBS730P10000	AC		C	Screw (3x10)
N1	XNGS730-18000	AD		C	Nut (M3)
	(Unit)				
901	CFRM-2265XH04	BV	N	E	Fusing unit

[7] Packing material & Accessories



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[7] Packing material & Accessories						
1	UDSKA2072XHZZ	AX	N	D	CD-ROM	
2	TCADH3943XHZZ	AG	N	D	Setup guide	
3	TLABP720KXHZZ	AF	N	D	Rapid key labels	
4	TCADH3984XHZZ	AF	N	D	Quick reference guide	
5	TGANE2417XHZZ	AD	N	D	Warranty sheet	
7	SSAKA2003XHZZ	AA		D	Polyethylene bag	
8	LPLTP3486XHSA	AG	N	C	Document exit tray 1	
9	LPLTP3487XHSA	AF	N	C	Document exit tray 2	
10	SPAKP420DXHZZ	AF	N	D	Polyethylene bag	
11	SPAKP274HXHZZ	AQ		D	Vinyl cover	
12	SPAKC508HXHTZ	AY	N	D	Packing case	
13	SPAKA504HXHZZ	AH	N	D	Packing add., top, left	
14	SPAKA505HXHZZ	AH	N	D	Packing add., top, right	
15	SPAKA506HXHZZ	AH	N	D	Packing add., bottom, left	
16	SPAKA507HXHZZ	AH	N	D	Packing add., bottom, right	
17	SPAKA509HXHZZ	AG	N	D	Pad A	
18	SPAKA529HXHZZ	AF	N	D	PadB	
19	SPAKA623HXHZZ	AD	N	D	Drum protection	
20	DUNTK245DXHPW	AX		E	Handset	
21	LPLTP3442XHSA	AQ		C	Paper tray	
22	SSAKA596HXHZZ	AD		D	Polethylene bag	
23	DUNT-423KXH01	BT	N	S	Drum cartridge (Initial starter cartridge)	
24	PSHEZ3867XHZZ	AE	N	C	Shading sheet	
25	DUNT-424KXH01	BV	N	S	Toner cartridge (Initial starter cartridge)	
26	LPLTP3084XHZA	AH	N	C	Received document tray	
27	LPLTP3088XHZA	AM	N	C	Document feeder tray	
28	QCNWG202DXHFW	AP		C	Handset cord	
29	QCNWG370BXHZZ	AL		C	Telephone line cord	
[8] Control PWB unit						
1	VHVRA391PV6-1	AE		B	Varistor(RA-391P-V6-2)	[AR1101]
2	VHVRA501PC6-1	AG		B	Varistor(RA-501P-C6)	[AR1102]
3	VHVRA501PC6-1	AG		B	Varistor(RA-501P-C6)	[AR1103]
4	UBATL2234XHZZ	AF		B	Battery(CR2032T34)	[BAT900]
5	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR100]
6	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR101]
7	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR102]
8	VRS-CG1JF330J	AC		C	Block resistor(33Ω x4)	[BR103]
9	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR104]
10	VRS-CG1JF330J	AC		C	Block resistor(33Ω x4)	[BR105]
11	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR106]
12	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR107]
13	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR108]
14	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR109]
15	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR110]
16	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR111]
17	VRS-CG1JF101J	AC		C	Block resistor(100Ω x4)	[BR112]
18	VRS-CG1JF103J	AC		C	Block resistor(10KΩ x4)	[BR200]
19	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR201]
20	VRS-CG1JF101J	AA		C	Block resistor(100Ω x4)	[BR500]
21	VRS-CG1JF103J	AC		C	Block resistor(10KΩ x4)	[BR600]
22	VRS-CG1JF330J	AC		C	Block resistor(33Ω x4)	[BR700]
23	VRS-CG1JF333J	AC		C	Block resistor(33KΩ x4)	[BR702]
24	VRS-CG1JF333J	AC		C	Block resistor(33KΩ x4)	[BR703]
25	VRS-CG1JF103J	AC		C	Block resistor(10KΩ x4)	[BR801]
26	VRS-CG1JF103J	AC		C	Block resistor(10KΩ x4)	[BR802]
27	VRS-CG1JF103J	AC		C	Block resistor(10KΩ x4)	[BR803]
28	VRS-CG1JF103J	AC		C	Block resistor(10KΩ x4)	[BR804]
29	VRS-CG1JF103J	AC		C	Block resistor(10KΩ x4)	[BR805]
30	VCKYCZ1EB471K	AD		C	Capacitor(25WV 470PF)	[C100]
31	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF)	[C101]
32	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C102]
33	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C103]
34	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C104]
35	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C105]
36	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C106]
37	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C107]
38	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C108]
39	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C109]
40	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C110]
41	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C111]
42	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C112]
43	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C113]
44	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C114]
45	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C115]
46	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C116]
47	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C117]
48	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C118]
49	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C119]
50	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C120]
51	VCCCCZ1EH8R0D	AA		C	Capacitor(25WV 8PF)	[C121]
52	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μ F)	[C122]
53	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF)	[C123]
54	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F)	[C124]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] Control PWB unit					
55	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C125]
56	VCCCCZ1EH100D	AA		C	Capacitor(25WV 10PF) [C126]
57	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C127]
58	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C128]
59	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C129]
60	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C130]
61	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C131]
62	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C132]
63	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C133]
64	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C134]
65	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C135]
66	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C136]
67	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C137]
68	VCCCCZ1EH180J	AA		C	Capacitor(25WV 18PF) [C139]
69	VCCCCZ1EH220J	AA		C	Capacitor(25WV 22PF) [C140]
70	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C142]
71	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C143]
72	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C200]
73	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C201]
74	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C202]
75	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C203]
76	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C204]
77	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C205]
78	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C206]
79	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C207]
80	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C208]
81	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C209]
82	VCCCCZ1EH270J	AA		C	Capacitor(25WV 27PF) [C210]
83	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C211]
84	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C212]
85	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1μ F) [C213]
86	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C214]
87	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C215]
88	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C303]
89	VCCCCZ1EH330J	AC		C	Capacitor(25WV 33PF) [C304]
90	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μ F) [C305]
91	VCEAEA1CW226M	AA		C	Capacitor(16WV 22μ F) [C306]
92	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C307]
93	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C310]
94	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C400]
95	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μ F) [C401]
96	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C402]
97	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C403]
98	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C404]
99	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C405]
100	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C406]
101	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C407]
102	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C408]
103	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μ F) [C502]
104	RC-EZ3133XHZZ	AE	N	C	Capacitor(50WV 100μ F) [C503]
105	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C504]
106	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μ F) [C506]
107	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μ F) [C507]
108	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μ F) [C508]
109	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μ F) [C509]
110	VCKYCY1CF224Z	AB		C	Capacitor(16WV 0.22μ F) [C510]
111	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μ F) [C511]
112	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C512]
113	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C513]
114	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C514]
115	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C515]
116	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C517]
117	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C518]
118	VCEAGA1EW107M	AB		C	Capacitor(25WV 100μ F) [C601]
119	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C602]
120	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μ F) [C608]
121	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C609]
122	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μ F) [C611]
123	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μ F) [C612]
124	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μ F) [C613]
125	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μ F) [C614]
126	VCKYCZ1HB681K	AA		C	Capacitor(50WV 680PF) [C615]
127	VCKYCZ1HB681K	AA		C	Capacitor(50WV 680PF) [C616]
128	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C617]
129	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C618]
130	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C700]
131	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C701]
132	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C705]
133	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C713]
134	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C718]
135	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C719]
136	VCCCCZ1EH150J	AC		C	Capacitor(25WV 15PF) [C800]
137	VCCCCZ1EH180J	AA		C	Capacitor(25WV 18PF) [C801]
138	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C802]
139	VCKYCZ1CB103K	AA		C	Capacitor(16WV 0.01μ F) [C803]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] Control PWB unit					
140	VCKYCZ1CB103K	AA		C	Capacitor(16WV 0.01μ F) [C804]
141	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C805]
142	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C806]
143	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C807]
144	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C808]
145	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C809]
146	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C810]
147	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF) [C811]
148	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1μ F) [C812]
149	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1μ F) [C813]
150	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C814]
151	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1μ F) [C815]
152	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C816]
153	VCKYCY1HB682K	AA		C	Capacitor(50WV 6800PF) [C817]
154	VCKYCY1HB682K	AA		C	Capacitor(50WV 6800PF) [C818]
155	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C819]
156	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C820]
157	VCKYCZ1CB103K	AA		C	Capacitor(16WV 0.01μ F) [C821]
158	VCKYCZ1CB103K	AA		C	Capacitor(16WV 0.01μ F) [C822]
159	VCKYCZ1CB223K	AB		C	Capacitor(16WV 0.022μ F) [C823]
160	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C901]
161	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C902]
162	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C903]
163	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1μ F) [C904]
164	RC-EZ3133XHZZ	AE	N	C	Capacitor(50WV 100μ F) [C905]
165	VCCCCZ1EH390J	AD	N	C	Capacitor(25WV 39PF) [C1000]
166	VCCCCZ1EH150J	AC		C	Capacitor(25WV 15PF) [C1001]
167	VCKYCZ1CB103K	AA		C	Capacitor(16WV 0.01μ F) [C1002]
168	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1003]
169	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C1004]
170	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1005]
171	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1006]
172	VCCCCZ1EH221J	AB		C	Capacitor(25WV 220PF) [C1007]
173	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C1008]
174	VCKYCY1AB105K	AB		C	Capacitor(10WV 1μ F) [C1009]
175	VCCCCZ1HH331J	AC		C	Capacitor(50WV 330PF) [C1010]
176	VCKYCZ1CB103K	AA		C	Capacitor(16WV 0.01μ F) [C1011]
177	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μ F) [C1012]
178	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1013]
179	VCKYCZ1EB472K	AA		C	Capacitor(25WV 4700PF) [C1014]
180	VCCCCZ1HH331J	AC		C	Capacitor(50WV 330PF) [C1015]
181	VCCCCZ1HH331J	AC		C	Capacitor(50WV 330PF) [C1016]
182	VCKYCZ1CB223K	AB		C	Capacitor(16WV 0.022μ F) [C1017]
183	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μ F) [C1102]
184	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μ F) [C1103]
185	RC-KZ3127XHZZ	AD	N	C	Capacitor(250WV 0.01μ F) [C1104]
186	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μ F) [C1105]
187	VCKRTN2EX473K	AD	N	C	Capacitor(250WV 0.047μ F) [C1106]
188	VCCCCY1HH470J	AA		C	Capacitor(50WV 47PF) [C1107]
189	VCCCCZ1EH151J	AA		C	Capacitor(25WV 150PF) [C1108]
190	VCCCCZ1EH151J	AA		C	Capacitor(25WV 150PF) [C1109]
191	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μ F) [C1110]
192	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μ F) [C1111]
193	RC-KZ3132XHZZ	AG	N	C	Capacitor(250WV 470PF) [C1112]
194	RC-KZ3132XHZZ	AG	N	C	Capacitor(250WV 470PF) [C1113]
195	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C1200]
196	VCCCCZ1EH220J	AA		C	Capacitor(25WV 22PF) [C1201]
197	VCKYCY1AB225K	AB		C	Capacitor(10WV 2.2μ F) [C1203]
198	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μ F) [C1205]
199	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1207]
200	VCKYCZ1EB222K	AB		C	Capacitor(25WV 2200PF) [C1209]
201	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1210]
202	VCKYCZ1EB391K	AD		C	Capacitor(25WV 390PF) [C1211]
203	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1213]
204	VCKYTV1HF105Z	AA		C	Capacitor(50WV 1μ F) [C1214]
205	VCKYCY1AB105K	AB		C	Capacitor(10WV 1μ F) [C1216]
206	VCKYCY1AB225K	AB		C	Capacitor(10WV 2.2μ F) [C1219]
207	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF) [C1220]
208	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C1221]
209	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1222]
210	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1223]
211	VCKYTV1AF106Z	AC		C	Capacitor(10WV 10μ F) [C1224]
212	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1225]
213	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1227]
214	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1230]
215	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μ F) [C1231]
216	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μ F) [C1233]
217	QCNCM2666XH0G	AE		C	Connector(7pin) [CNCIS]
218	QCNCM2694XH0C	AE		C	Connector(3pin) [CNFM]
219	QCNCM2694XH0E	AE		C	Connector(5pin) [CNHV]
220	QJAKZ2090XHZZ	AT	N	C	Jack [CNLAN]
221	QJAKZ2087XH0B	AD		C	Jack [CNLNJ]
222	QCNCM7014SC0H	AB		C	Connector(8pin) [CNLSR]
223	QCNCM7014SC0D	AB		C	Connector(4pin) [CNMM]
224	QCNCM2401SC0B	AA		C	Connector(2pin) [CNPIN]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] Control PWB unit					
225	QCNCM2666XH0E	AE		C	Connector(5pin) [CNPM]
226	QCNCW2556SC1i	AG		C	Connector(19pin) [CNPN]
227	QCNCM7014SC0C	AA		C	Connector(3pin) [CNPOUT]
228	QCNCM2743XH1J	AF	N	C	Connector(10pin) [CNPW]
229	QCNCM2442SC0B	AB		C	Connector(2pin) [CNRTH]
230	QCNCM7014SC0B	AD		C	Connector(2pin) [CNSL]
231	QCNCM2666XH0B	AD		C	Connector(2pin) [CNPS]
232	QCNCM2694XH0E	AE		C	Connector(5pin) [CNTEL]
233	QCNCM2401SC0D	AC		C	Connector(4pin) [CNTNR]
234	QCNCM2666XH0D	AD		C	Connector(4pin) [CNTXM]
235	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [D100]
236	VHD1SS302F+-1	AF		B	Diode(1SS302) [D101]
237	VHD1SS302F+-1	AF		B	Diode(1SS302) [D103]
238	VHD1SS352F+-1	AF		B	Diode(1SS352) [D300]
239	VHD1SS352F+-1	AF		B	Diode(1SS352) [D301]
240	RH-EX2502XHZZ	AC		B	Zener diode(HZU6.2B2) [D500]
241	VHD1SS301+-1	AD	N	B	Diode(1SS301) [D501]
242	RH-EX2502XHZZ	AC		B	Zener diode(HZU6.2B2) [D600]
243	VHDB715F//--1	AF		B	Diode(RB715F) [D900]
244	VHD1SS352F+-1	AF		B	Diode(1SS352) [D901]
245	VHDSS16///--1	AF		B	Diode(SS16) [D902]
246	VHD1SS352F+-1	AF		B	Diode(1SS352) [D1200]
247	QFS-L2021XHZZ	AE		A	IC protector(KAB5002 251) [F300]
248	QFS-L2025XHZZ	AE		A	IC protector(KAB2402 402) [F500]
249	QPRTR2001XHZZ	AF		A	IC protector(KAB5002 321) [F501]
250	QFS-L1037YCZZ	AD		A	IC protector(KAB3202 801) [F600]
251	-	-	N	B	IC (Supplied with RKITE2001XHZZ)(CX95410-12Z) [IC100]
252	DROM-582XXH01	AZ	N	E	Service IC, Flash ROM(16MB) (Ver.: TF78C) [IC200]
253	VHi25V016CS-1	AX		B	IC(SST25VF016B) [IC201]
254	VHiEDS2516A-1	AF	N	B	IC(EDS2516AFTA-75-E) [IC202]
255	VHi25V016CS-1	AX		B	IC(SST25VF016B) [IC203]
256	VHi25V016CS-1	AX		B	IC(SST25VF016B) [IC204]
257	VHi25V016CS-1	AX		B	IC(SST25VF016B) [IC206]
258	VHiVHC138FT-1	AF	N	B	IC(TC74VHC138FT) [IC207]
259	VHi421A380N-1	AF	N	B	IC(PST421A380NR) [IC208]
260	VHiVHCT00AT-1	AF	N	B	IC(TC74VHCT00AFT) [IC300]
261	RH-iX2457XHZZ	AG		B	IC(74LV1GW14ASCE-E) [IC301]
262	RH-iX2461XHZZ	AH		B	IC(KIA7805API/P) [IC302]
263	VHiLM393LS+-1	AE	N	B	IC(LM393L) [IC400]
264	VHi7WH74FKF-1	AF	N	B	IC(TC7WH74FK) [IC401]
265	RH-iX2447XHZZ	AX		B	IC(A3982SLB) [IC500]
266	VHiA3967SLB-1	AW	N	B	IC(A3967SLBTR-T) [IC600]
267	VHi74VH573T-1	AG	N	B	IC(TC74VHC573FT) [IC700]
268	RH-iX2411XHZZ	AG		B	IC(SN74LV244APWR) [IC701]
269	VHiLAN9118+-1	BA	N	B	IC(LAN9118-MT) [IC800]
270	VHi48033BF+-1	AF	N	B	IC(TA48033BF) [IC900]
271	-	-	N	B	IC (Supplied with RKITE2001XHZZ)(CX95110) [IC1000]
272	VHiMC34119L-1	AN		B	IC(MC34119L) [IC1001]
273	-	-	N	B	IC (Supplied with RKITE2001XHZZ)(CX20548-11Z) [IC1100]
274	-	-	N	B	IC (Supplied with RKITE2001XHZZ)(CX20548-12Z) [IC1200]
275	RH-iX2346XHZZ	AG		B	IC(HA17358AFEL) [IC1201]
276	VHiTC7PA53F-1	AG		B	IC(TC7PA53FU) [IC1202]
277	VRS-CY1JB2R0J	AD		C	Resistor(1/16W 2.0Ω ± 5%) [L100]
278	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [L101]
279	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [L300]
280	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [L600]
281	RCiLF2220XHZZ	AF	N	C	Coil(DLW21SN670SQ2) [L800]
282	RCiLF2220XHZZ	AF	N	C	Coil(DLW21SN670SQ2) [L801]
283	RCiLZ0285AFZZ	AB		C	Coil(MMZ1608Y102B) [L1100]
284	RCiLZ0285AFZZ	AB		C	Coil(MMZ1608Y102B) [L1101]
285	VS2SA2059+-1	AH		B	Transistor(2SA2059) [Q100]
286	VSRN1702F+-1	AF		B	Transistor(RN1702) [Q300]
287	VSRN1702F+-1	AF		B	Transistor(RN1702) [Q301]
288	VSRT5N234CT-1	AD	N	B	Transistor(RT5N234C) [Q302]
289	VSRN2406YF+-1	AF		B	Transistor(RN2406) [Q400]
290	VSRT5N234CT-1	AD	N	B	Transistor(RT5N234C) [Q500]
291	VS2SC2712GR-1	AB		B	Transistor(2SC2712GR) [Q600]
292	VSRN1406F+-1	AF		B	Transistor(RN1406) [Q900]
293	VSRN1406F+-1	AF		B	Transistor(RN1406) [Q1000]
294	VS2SC4548+-1	AF	N	B	Transistor(2SC4548) [Q1100]
295	VS2SC4548+-1	AF	N	B	Transistor(2SC4548) [Q1101]
296	VS2SC4548+-1	AF	N	B	Transistor(2SC4548) [Q1102]
297	VS2SC4548+-1	AF	N	B	Transistor(2SC4548) [Q1103]
298	VSKTC3198GR-1	AD		B	Transistor(KTC3198GR) [Q1200]
299	VSRN1406F+-1	AF		B	Transistor(RN1406) [Q1201]
300	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R100]
301	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R101]
302	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R102]
303	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33Ω ± 5%) [R103]
304	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R104]
305	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R105]
306	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R106]
307	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R108]
308	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R109]
309	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R110]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] Control PWB unit					
310	VRS-CZ1JB225J	AA		C	Resistor(1/16W 2.2M Ω \pm 5%) [R111]
311	VRS-CZ1JB752F	AC	N	C	Resistor(1/16W 7.5K Ω \pm 1%) [R112]
312	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R113]
313	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R115]
314	VRS-CZ1JB222J	AD		C	Resistor(1/16W 2.2K Ω \pm 5%) [R116]
315	VRS-CZ1JB104J	AA		C	Resistor(1/16W 100K Ω \pm 5%) [R117]
316	VRS-CY1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R118]
317	VRS-CZ1JB105J	AD		C	Resistor(1/16W 1M Ω \pm 5%) [R119]
318	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R120]
319	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33 Ω \pm 5%) [R121]
320	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33 Ω \pm 5%) [R122]
321	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33 Ω \pm 5%) [R123]
322	VRS-CZ1JB122J	AA		C	Resistor(1/16W 1.2K Ω \pm 5%) [R124]
323	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R125]
324	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R126]
325	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100 Ω \pm 5%) [R201]
326	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R202]
327	VRS-CZ1JB472J	AA		C	Resistor(1/16W 4.7K Ω \pm 5%) [R204]
328	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R206]
329	VRS-CZ1JB222J	AD		C	Resistor(1/16W 2.2K Ω \pm 5%) [R213]
330	VRS-CZ1JB332J	AA		C	Resistor(1/16W 3.3K Ω \pm 5%) [R300]
331	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R301]
332	VRS-CZ1JB100J	AA		C	Resistor(1/16W 10 Ω \pm 5%) [R302]
333	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R303]
334	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100 Ω \pm 5%) [R304]
335	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100 Ω \pm 5%) [R305]
336	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R306]
337	VRS-CZ1JB102J	AA		C	Resistor(1/16W 1K Ω \pm 5%) [R307]
338	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100 Ω \pm 5%) [R308]
339	VRS-CZ1JB100J	AA		C	Resistor(1/16W 10 Ω \pm 5%) [R309]
340	VRS-CZ1JB104J	AA		C	Resistor(1/16W 100K Ω \pm 5%) [R310]
341	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R311]
342	VRS-HT3DA470J	AA		C	Resistor(2W 47 Ω \pm 5%) [R312]
343	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33 Ω \pm 5%) [R313]
344	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100 Ω \pm 5%) [R314]
345	VRS-CZ1JB752F	AC	N	C	Resistor(1/16W 7.5K Ω \pm 1%) [R400]
346	VRS-CZ1JB222J	AD		C	Resistor(1/16W 2.2K Ω \pm 5%) [R401]
347	VRS-CZ1JB222J	AD		C	Resistor(1/16W 2.2K Ω \pm 5%) [R402]
348	VRS-CZ1JB154J	AD		C	Resistor(1/16W 150K Ω \pm 5%) [R403]
349	VRS-CZ1JB472J	AA		C	Resistor(1/16W 4.7K Ω \pm 5%) [R404]
350	VRS-CZ1JB105J	AD		C	Resistor(1/16W 1M Ω \pm 5%) [R405]
351	VRS-CZ1JB222J	AD		C	Resistor(1/16W 2.2K Ω \pm 5%) [R406]
352	VRS-CZ1JB303J	AD		C	Resistor(1/16W 30K Ω \pm 5%) [R407]
353	VRS-CZ1JB203J	AD		C	Resistor(1/16W 20K Ω \pm 5%) [R408]
354	VRS-CZ1JB104J	AA		C	Resistor(1/16W 100K Ω \pm 5%) [R409]
355	VRS-CZ1JB562J	AA		C	Resistor(1/16W 5.6K Ω \pm 5%) [R410]
356	VRS-CZ1JB472J	AA		C	Resistor(1/16W 4.7K Ω \pm 5%) [R411]
357	VRS-CZ1JB105J	AD		C	Resistor(1/16W 1M Ω \pm 5%) [R412]
358	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R500]
359	VRS-HT3AAR22J	AA		C	Resistor(1W 0.22 Ω \pm 5%) [R501]
360	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R502]
361	VRS-CZ1JB203J	AD		C	Resistor(1/16W 20K Ω \pm 5%) [R503]
362	VRS-CZ1JB303J	AD		C	Resistor(1/16W 30K Ω \pm 5%) [R504]
363	VRS-HT3AAR22J	AA		C	Resistor(1W 0.22 Ω \pm 5%) [R505]
364	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R507]
365	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100 Ω \pm 5%) [R508]
366	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R509]
367	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100 Ω \pm 5%) [R510]
368	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100 Ω \pm 5%) [R511]
369	VRS-CZ1JB100J	AA		C	Resistor(1/16W 10 Ω \pm 5%) [R600]
370	VRS-CY1JB100J	AA		C	Resistor(1/16W 10 Ω \pm 5%) [R602]
371	VRS-CZ1JB100J	AA		C	Resistor(1/16W 10 Ω \pm 5%) [R603]
372	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R604]
373	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R605]
374	VRS-CY1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R607]
375	VRS-CY1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R609]
376	VRS-CZ1JB102J	AA		C	Resistor(1/16W 1K Ω \pm 5%) [R610]
377	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R611]
378	VRS-TV2ABR22J	AC	N	C	Resistor(1/10W 0.22 Ω \pm 5%) [R613]
379	VRS-CZ1JB123J	AD		C	Resistor(1/16W 12K Ω \pm 5%) [R614]
380	VRS-CZ1JB133J	AC		C	Resistor(1/16W 13K Ω \pm 5%) [R615]
381	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R616]
382	VRS-CZ1JB332J	AA		C	Resistor(1/16W 3.3K Ω \pm 5%) [R617]
383	VRS-TV2ABR22J	AC	N	C	Resistor(1/10W 0.22 Ω \pm 5%) [R618]
384	VRS-CZ1JB303J	AD		C	Resistor(1/16W 30K Ω \pm 5%) [R619]
385	VRS-CZ1JB303J	AD		C	Resistor(1/16W 30K Ω \pm 5%) [R620]
386	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33 Ω \pm 5%) [R621]
387	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R700]
388	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R701]
389	VRS-CZ1JB333J	AA		C	Resistor(1/16W 33K Ω \pm 5%) [R703]
390	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R704]
391	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R705]
392	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R706]
393	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10K Ω \pm 5%) [R707]
394	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0 Ω \pm 5%) [R708]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] Control PWB unit					
395	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33Ω ± 5%) [R709]
396	VRS-CZ1JB105J	AD		C	Resistor(1/16W 1MΩ ± 5%) [R800]
397	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R801]
398	VRS-CZ1JB331J	AA		C	Resistor(1/16W 330Ω ± 5%) [R802]
399	VRS-TV2AB123F	AC	N	C	Resistor(1/10W 12KΩ ± 1%) [R803]
400	VRS-TV2AB000J	AA		C	Resistor(1/10W 0Ω ± 5%) [R804]
401	VRS-CZ1JB102J	AA		C	Resistor(1/16W 1KΩ ± 5%) [R805]
402	VRSTV2AB1242F	AC	N	C	Resistor(1/10W 12.4KΩ ± 1%) [R806]
403	VRSCY1JB49R9F	AG		C	Resistor(1/16W 49.9Ω ± 1%) [R807]
404	VRSCY1JB49R9F	AG		C	Resistor(1/16W 49.9Ω ± 1%) [R808]
405	VRS-CY1JB100F	AC	N	C	Resistor(1/16W 10Ω ± 1%) [R809]
406	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R812]
407	VRSCY1JB49R9F	AG		C	Resistor(1/16W 49.9Ω ± 1%) [R814]
408	VRSCY1JB49R9F	AG		C	Resistor(1/16W 49.9Ω ± 1%) [R815]
409	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R816]
410	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R817]
411	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33Ω ± 5%) [R818]
412	VCKYTV1HF104Z	AA		C	Capacitor(50WV 0.1μ F) [R819]
413	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33Ω ± 5%) [R821]
414	VRS-TV2AB000J	AA		C	Resistor(1/10W 0Ω ± 5%) [R822]
415	VRS-TV2AB000J	AA		C	Resistor(1/10W 0Ω ± 5%) [R823]
416	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R824]
417	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R825]
418	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R900]
419	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R901]
420	VRS-CZ1JB333J	AA		C	Resistor(1/16W 33KΩ ± 5%) [R902]
421	VRS-CZ1JB151J	AA		C	Resistor(1/16W 150Ω ± 5%) [R1000]
422	VRS-CZ1JB244J	AD		C	Resistor(1/16W 240KΩ ± 5%) [R1002]
423	VRS-CZ1JB151J	AA		C	Resistor(1/16W 150Ω ± 5%) [R1003]
424	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1005]
425	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1006]
426	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R1007]
427	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1008]
428	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1011]
429	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R1012]
430	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R1013]
431	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R1014]
432	VRS-CZ1JB224J	AA		C	Resistor(1/16W 220KΩ ± 5%) [R1015]
433	VRS-CZ1JB104J	AA		C	Resistor(1/16W 100KΩ ± 5%) [R1016]
434	VRS-CZ1JB303J	AD		C	Resistor(1/16W 30KΩ ± 5%) [R1017]
435	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1018]
436	VRS-CZ1JB203J	AD		C	Resistor(1/16W 20KΩ ± 5%) [R1019]
437	VRS-CZ1JB224J	AA		C	Resistor(1/16W 220KΩ ± 5%) [R1020]
438	VRS-CZ1JB102J	AA		C	Resistor(1/16W 1KΩ ± 5%) [R1021]
439	VRS-CZ1JB472J	AA		C	Resistor(1/16W 4.7KΩ ± 5%) [R1022]
440	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R1023]
441	VRS-CZ1JB132J	AD		C	Resistor(1/16W 1.3KΩ ± 5%) [R1024]
442	VRS-CZ1JB201J	AA		C	Resistor(1/16W 200Ω ± 5%) [R1025]
443	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1100]
444	VRSTV2AB6814F	AC	N	C	Resistor(1/10W 6.8MΩ ± 1%) [R1101]
445	VRS-CY1JB154F	AC	N	C	Resistor(1/16W 150KΩ ± 1%) [R1102]
446	VRSTV2AB6814F	AC	N	C	Resistor(1/10W 6.8MΩ ± 1%) [R1103]
447	VRSTV2AB2373F	AC	N	C	Resistor(1/10W 237KΩ ± 1%) [R1104]
448	VRS-TX2HD281F	AD	N	C	Resistor(1/2W 280Ω ± 1%) [R1106]
449	VRS-TX2HD281F	AD	N	C	Resistor(1/2W 280Ω ± 1%) [R1107]
450	VRS-TX2HD281F	AD	N	C	Resistor(1/2W 280Ω ± 1%) [R1108]
451	VRS-TX2HD281F	AD	N	C	Resistor(1/2W 280Ω ± 1%) [R1109]
452	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1110]
453	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ± 5%) [R1111]
454	VRSCY1JB3R01F	AC	N	C	Resistor(1/16W 3.01KΩ ± 1%) [R1113]
455	VRSCY1JB3R01F	AC	N	C	Resistor(1/16W 3.01KΩ ± 1%) [R1115]
456	VRS-CY1JB111J	AB	N	C	Resistor(1/16W 110Ω ± 5%) [R1117]
457	VRS-TW2ED9R1F	AC	N	C	Resistor(1/4W 9.1Ω ± 1%) [R1118]
458	VRS-CZ1JB222J	AD		C	Resistor(1/16W 2.2KΩ ± 5%) [R1200]
459	VRS-CZ1JB474J	AD		C	Resistor(1/16W 470KΩ ± 5%) [R1201]
460	VRS-CZ1JB511J	AB		C	Resistor(1/16W 510Ω ± 5%) [R1202]
461	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R1203]
462	VRS-CY1JB154F	AC	N	C	Resistor(1/16W 150KΩ ± 1%) [R1204]
463	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R1205]
464	VRSCY1JB3011F	AA		C	Resistor(1/16W 3.01KΩ ± 1%) [R1206]
465	VRS-CZ1JB393J	AD		C	Resistor(1/16W 39KΩ ± 5%) [R1207]
466	VRS-CZ1JB332J	AA		C	Resistor(1/16W 3.3KΩ ± 5%) [R1208]
467	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1210]
468	VRS-CZ1JB823J	AD		C	Resistor(1/16W 82KΩ ± 5%) [R1211]
469	VRS-CZ1JB102J	AA		C	Resistor(1/16W 1KΩ ± 5%) [R1212]
470	VRS-CZ1JB332J	AA		C	Resistor(1/16W 3.3KΩ ± 5%) [R1213]
471	VRSCY1JB3011F	AA		C	Resistor(1/16W 3.01KΩ ± 1%) [R1214]
472	VRS-CZ1JB393J	AD		C	Resistor(1/16W 39KΩ ± 5%) [R1215]
473	VRS-CZ1JB133J	AC		C	Resistor(1/16W 13KΩ ± 5%) [R1217]
474	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1219]
475	VRS-TW2ED151J	AB	N	C	Resistor(1/4W 150Ω ± 5%) [R1220]
476	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1221]
477	VRS-CZ1JB102J	AA		C	Resistor(1/16W 1KΩ ± 5%) [R1224]
478	VRS-CZ1JB472J	AA		C	Resistor(1/16W 4.7KΩ ± 5%) [R1225]
479	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1226]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] Control PWB unit					
480	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1227]
481	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ± 5%) [R1229]
482	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ± 5%) [R1231]
483	VRS-TP2BD101J	AA		C	Resistor(1/8W 100Ω ± 5%) [R1232]
484	VRS-CZ1JB102J	AA		C	Resistor(1/16W 1KΩ ± 5%) [R1233]
485	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ± 5%) [R1237]
486	RH-DX1721AFZZ	AF		B	Diode bridge(S1ZB60) [REC1100]
487	RTRND2180XHZZ	AL	N	B	Transformer(82154R) [T1100]
488	VHVTND5V331-1	AF	N	B	Varistor(TND05V-331KT) [VA1100]
489	RCRSA2233XHPZ	AG		B	Crystal(32.768kHz) [X100]
490	RCRSP2238XHZZ	AH		B	Crystal(24MHz) [X101]
491	RCRSP2237XHZZ	AK		B	Crystal(25MHz) [X800]
492	RCRSP2194XHZZ	AL		B	Crystal(28.2240MHz) [X1000]
493	RK i T e 2001XHZZ	BQ	N	B	IC kit
	(Unit)				
901	DCEKC582XXH01	CA	N	E	Control PWB unit (within ROM)
[9] Power supply PWB unit					
1	0KYL5051AQ001	AE		C	Ferrite beads(BL02RN1) [BEA1]
2	0KYC2131QS224	AK		C	Film capacitor(275WV 0.22μ F) [C1]
3	0KYC2131QS224	AK		C	Film capacitor(275WV 0.22μ F) [C2]
4	0KYC3160KS221	AT	N	C	Electrolytic capacitor(200WV 220μ F) [C5]
5	0KYC1384QS332	AG		C	Ceramic capacitor(3300PF) [C6]
6	0KYC1076QQ103	AL		C	Ceramic capacitor(0.01μ F) [C7]
7	0KYC10A9RQ221	AG		C	Ceramic capacitor(1KWV 220PF) [C8]
8	0KYC1330EC103	AC	N	C	Ceramic capacitor(50WV 0.01μ F) [C9]
9	0KYC1330EC472	AC	N	C	Ceramic capacitor(50WV 4700PF) [C10]
10	0KYC1131EC101	AC		C	Capacitor(50WV 100PF) [C11]
11	0KYC1076QQ103	AL		C	Ceramic capacitor(0.01μ F) [C17]
12	0KYC1330EC103	AC	N	C	Ceramic capacitor(50WV 0.01μ F) [C22]
13	0KYC30A0DQ102	AR	N	C	Electrolytic capacitor(35WV 1000μ F) [C102]
14	0KYC30A0DQ330	AG		C	Electrolytic capacitor(35WV 33μ F) [C103]
15	0KYC1133EC104	AC	N	C	Ceramic capacitor(50WV 0.1μ F) [C105]
16	0KYC10A9RQ102	AH	N	C	Ceramic capacitor(1KWV 1000PF) [C108]
17	0KYC30A0DQ560	AG		C	Electrolytic capacitor(35WV 56μ F) [C151]
18	0KYC30A0BQ331	AK		C	Electrolytic capacitor(16WV 330μ F) [C301]
19	0KYC1133EC104	AC	N	C	Ceramic capacitor(50WV 0.1μ F) [C501]
20	0KYC1330EC103	AC	N	C	Ceramic capacitor(50WV 0.01μ F) [C502]
21	0KYC1330EC103	AC	N	C	Ceramic capacitor(50WV 0.01μ F) [C503]
22	0KYK2051AQ002	AG		C	Connector(3pin) [CN1]
23	0KYK2061AQ002	AF		C	Connector(2pin) [CN2]
24	0KYK2014LQ010	AN	N	C	Connector(10Pin) [CN3]
25	0KYK2051AQ002	AG		C	Connector(3pin) [CN4]
26	0KYK2148LS005	AG		C	Connector(3pin) [CN5]
27	0KYD4103AC041	AE	N	B	Zener diode(MA8330) [D2]
28	0KYD2116AC008	AE		B	Diode(MA111) [D4]
29	0KYD4103AC013	AG		B	Zener diode(MA8091) [D5]
30	0KYD2116AC008	AE		B	Diode(MA111) [D6]
31	0KYD2116AC008	AE		B	Diode(MA111) [D7]
32	0KYD1057AQ006	AF		B	Diode(ERA15-06) [D10]
33	0KYD1057AQ006	AF		B	Diode(ERA15-06) [D11]
34	0KYD1057AQ006	AF		B	Diode(ERA15-06) [D12]
35	0KYD1057AQ006	AF		B	Diode(ERA15-06) [D13]
36	0KYD1057AQ006	AF		B	Diode(ERA15-06) [D51]
37	0KYD1057AQ006	AF		B	Diode(ERA15-06) [D52]
38	0KYD3101AA010	AL		B	Diode(ERB84-010) [D101]
39	0KYD3101AA010	AL		B	Diode(ERB84-010) [D102]
40	0KYD4145AA005	AK		B	Zener diode(TZP30B) [D104]
41	0KYD4103AC008	AE		B	Zener diode(MA8068) [D110]
42	0KYD2066AQ006	AH		B	Diode(ERA83-006) [D151]
43	0KYD20Q0AQ003	AL		B	Diode(EC31QS03L) [D301]
44	0KYD20Q0AQ003	AL		B	Diode(EC31QS03L) [D302]
45	0KYD2116AC008	AE		B	Diode(MA111) [D501]
46	0KYK7135AS007	AN	N	A	Fuse(AC250V/10A) [F1]
47	0KYK7144AR005	AL		A	Fuse(AC250V/4A) [F2]
48	0KYK7144AR005	AL		A	Fuse(AC250V/4A) [F101]
49	0KYK7144AR002	AN	N	A	Fuse(AC250V/2A) [F301]
50	0KY0MPS902200	AF		C	Heat sink [HS1]
51	0KY0MPS902200	AF		C	Heat sink [HS2]
52	0KYW0000AQ007	AC		C	Wire(7.5mm) [J1]
53	0KYW0000AQ020	AC	N	C	Wire(20mm) [J2]
54	0KYW0000AQ007	AC		C	Wire(7.5mm) [J3]
55	0KYW0000AQ020	AC	N	C	Wire(20mm) [J4]
56	0KYW0000AQ015	AC		C	Wire(15mm) [J5]
57	0KYW0000AQ015	AC		C	Wire(15mm) [J6]
58	0KYW0000AQ015	AC		C	Wire(15mm) [J7]
59	0KYW0000AQ005	AC		C	Wire(5mm) [J8]
60	0KYW0000AQ007	AC		C	Wire(7.5mm) [J101]
61	0KYW0000AQ005	AC		C	Wire(5mm) [J102]
62	0KYW0000AQ007	AC		C	Wire(7.5mm) [J103]
63	0KYW0000AQ007	AC		C	Wire(7.5mm) [J104]
64	0KYW0000AQ015	AC		C	Wire(15mm) [J105]
65	0KYW0000AQ007	AC		C	Wire(7.5mm) [J106]
66	0KYW0000AQ007	AC		C	Wire(7.5mm) [J107]
67	0KYW0000AQ007	AC		C	Wire(7.5mm) [J108]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[9] Power supply PWB unit						
68	0KYW0000AQ007	AC		C	Wire(7.5mm)	[J109]
69	0KYW0000AQ010	AC		C	Wire(10mm)	[J110]
70	0KYW0000AQ015	AC		C	Wire(15mm)	[J111]
71	0KYL1179JL193	AS	N	C	Coil(0R7A193F20A)	[L1]
72	0KYL1120RS400	AU	N	C	Coil(SN8LP-240JA)	[L3]
73	0KYD7102AR4R0	AN		B	NTC thermistor(NTPA74R0)	[NTC1]
74	0KYH7152AS001	AL		B	Optical isolater(PS2581AL1)	[PC1]
75	0KYH7151AS001	AW		B	Optical isolater(TLP363JF)	[PC2]
76	0KYH7152AS001	AL		B	Optical isolater(PS2581AL1)	[PC3]
77	0KYT3561KL001	AT		B	FET(2SK3561)	[Q1]
78	0KYT4097CC002	AG		B	Transistor(2SC4097)	[Q2]
79	0KYT4081CC002	AF		B	Transistor(2SC4081)	[Q101]
80	0KYT1020NC001	AG		B	Transistor(XP6501)	[Q501]
81	0KYR3126TC184	AB		C	Resistor(1/8W 180K Ω)	[R2]
82	0KYR3126TC184	AB		C	Resistor(1/8W 180K Ω)	[R3]
83	0KYR3116VC183	AC	N	C	Resistor(1/10W 18K Ω)	[R5]
84	0KYR3133AC561	AC	N	C	Resistor(1/4W 560 Ω)	[R6]
85	0KYR3122TC221	AC	N	C	Resistor(1/8W 220 Ω)	[R7]
86	0KYR3113VC333	AC	N	C	Resistor(1/10W 33K Ω)	[R8]
87	0KYR3113VC101	AC	N	C	Resistor(1/10W 100 Ω)	[R9]
88	0KYR3113VC682	AC	N	C	Resistor(1/10W 6.8K Ω)	[R10]
89	0KYR3116VC822	AC	N	C	Resistor(1/10W 8.2K Ω)	[R11]
90	0KYR3113VC223	AC	N	C	Resistor(1/10W 22K Ω)	[R12]
91	0KYR3113VC561	AC	N	C	Resistor(1/10W 560 Ω)	[R13]
92	0KYR3113VC681	AC	N	C	Resistor(1/10W 680 Ω)	[R17]
93	0KYR3133AC330	AC	N	C	Resistor(1/4W 33 Ω)	[R19]
94	0KYR3062UQ100	AL		C	Resistor(1/6W 10 Ω)	[R20]
95	0KYR3133AC100	AC	N	C	Resistor(1/4W 10 Ω)	[R21]
96	0KYR3133AC100	AC	N	C	Resistor(1/4W 10 Ω)	[R22]
97	0KYR3123TC151	AC	N	C	Resistor(1/8W 150 Ω)	[R23]
98	0KYR3123TC393	AC	N	C	Resistor(1/8W 39K Ω)	[R51]
99	0KYR3123TC393	AC	N	C	Resistor(1/8W 39K Ω)	[R52]
100	0KYR3123TC393	AC	N	C	Resistor(1/8W 39K Ω)	[R53]
101	0KYR3123TC393	AC	N	C	Resistor(1/8W 39K Ω)	[R54]
102	0KYR3123TC103	AC	N	C	Resistor(1/8W 10K Ω)	[R58]
103	0KYR3123TC103	AC	N	C	Resistor(1/8W 10K Ω)	[R59]
104	0KYR3133AC334	AC	N	C	Resistor(1/4W 330K Ω)	[R71]
105	0KYR3133AC334	AC	N	C	Resistor(1/4W 330K Ω)	[R72]
106	0KYR3133AC334	AC	N	C	Resistor(1/4W 330K Ω)	[R73]
107	0KYR3113VC102	AC	N	C	Resistor(1/10W 1K Ω)	[R101]
108	0KYR3113VC101	AC	N	C	Resistor(1/10W 100 Ω)	[R102]
109	0KYR3113VC334	AC		C	Resistor(1/10W 330K Ω)	[R103]
110	0KYR3116VC123	AC	N	C	Resistor(1/10W 12K Ω)	[R105]
111	0KYR3116VC682	AC	N	C	Resistor(1/10W 6.8K Ω)	[R106]
112	0KYR3116VC102	AC	N	C	Resistor(1/10W 1K Ω)	[R107]
113	0KYR3133AC562	AC	N	C	Resistor(1/4W 5.6K Ω)	[R111]
114	0KYR3133AC562	AC	N	C	Resistor(1/4W 5.6K Ω)	[R113]
115	0KYR3133AC562	AC	N	C	Resistor(1/4W 5.6K Ω)	[R115]
116	0KYR3133AC562	AC	N	C	Resistor(1/4W 5.6K Ω)	[R116]
117	0KYR3133AC472	AC	N	C	Resistor(1/4W 4.7K Ω)	[R501]
118	0KYR3133AC472	AC	N	C	Resistor(1/4W 4.7K Ω)	[R502]
119	0KYR3133AC472	AC	N	C	Resistor(1/4W 4.7K Ω)	[R503]
120	0KYR3133AC472	AC	N	C	Resistor(1/4W 4.7K Ω)	[R504]
121	0KYR3113VC103	AC	N	C	Resistor(1/10W 10K Ω)	[R505]
122	0KYR3113VC103	AC	N	C	Resistor(1/10W 10K Ω)	[R506]
123	0KYR3113VC103	AC	N	C	Resistor(1/10W 10K Ω)	[R507]
124	0KYR3113VC473	AC	N	C	Resistor(1/10W 47K Ω)	[R508]
125	0KYK3104AL001	AU		B	Relay(G5PA-1)	[RL1]
126	0KYM1108AZ001	AE		C	Screw	[SR1]
127	0KYM1108AZ001	AE		C	Screw	[SR2]
128	0KYL2100DS169	BA	N	B	Transformer(169D1)	[T1]
129	0KYD5107AL002	AS	N	B	Triode AC semiconductor switch(TM1261)	[TRA1]
130	0KYR8054EQ502	AG		C	Variable resistor(1/10W 5K Ω)	[VR1]
131	0KYD7112AR002	AK	N	B	Transient voltage surge suppressor(ENE241D-10AD-TE)	[Z1]
	(Unit)					
901	RDENT2237XHZZ	BH	N	E	Power supply PWB unit	
[10] High voltage PWB unit						
	RDENT2239XHZZ	BF	N	E	High voltage PWB unit	
[11] Operation panel PWB unit						
1	VHPSG206S// -1	AG		B	Photo transistor(SG206S)	[PH1]
2	VHPGP1S094HCZ	AG		B	Photo transistor(GP1S094HCZ)	[PH2]
	(Unit)					
901	DCEKP418DXH01	BA	N	E	Operation panel PWB unit	
[12] Hook switch PWB unit						
1	QSW-Z2271SCZZ	AE		C	Hook switch	
	(Unit)					
901	DCEKP420DXH01	AL	N	E	Hook switch PWB unit	

■INDEX

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
【 C 】				
CCASP2204XH01	2-901	BS	N	E
CCNWN346CXH01	1-14	AP		C
CFRM-2265XH04	6-901	BV	N	E
CFRM-2285XH01	3-1	AZ	N	E
CFRM-2286XH01	5-901	BM	N	E
CROLP2499XH01	3-9	AM		C
CROLR2566XH01	1-3	AP	N	C
CROLR2567XH01	1-48	AP	N	C
【 D 】				
DCEKC582XXH01	1-2	CA	N	E
"	8-901	CA	N	E
DCEKP418DXH01	2-31	BA	N	E
"	11-901	BA	N	E
DCEKP420DXH01	1-1	AL	N	E
"	12-901	AL	N	E
DROM-582XXH01	8-252	AZ	N	E
DUNT-423KXH01	7-23	BT	N	S
DUNT-424KXH01	7-25	BV	N	S
DUNTK245DXHPW	7-20	AX		E
DUNTK425DXHZZ	1-30	BT	N	E
【 G 】				
GCABA2493XHSA	1-4	AM	N	C
GCABA2496XHSA	1-15	AY	N	D
GCABB2494XHSA	1-5	AH	N	C
GCABB2495XHSA	1-8	BA	N	D
GCASP2204XHZZ	2-18	AS	N	D
GCASP2205XHZZ	2-19	AM	N	D
GCOVA2565XHZZ	1-17	AY	N	C
GCOVA2566XHZZ	1-9	AL	N	C
GCOVA2567XHZZ	1-56	AL	N	C
GLEGG2089XHZZ	1-10	AE		C
【 H 】				
HPNLH2472XHSA	2-33	AL	N	D
【 J 】				
JBTN-2538XHSD	2-20	AF	N	C
JBTN-2541XHSB	2-21	AH	N	C
JBTN-2544XHSA	2-22	AQ	N	C
JBTN-2607XHSA	2-23	AL	N	C
JBTN-2608XHSA	2-24	AM	N	C
JBTN-2609XHSA	2-25	AM	N	C
【 L 】				
LBNDJ2006XHZZ	1-31	AA		C
"	6-5	AA		C
LBSHP2161XHZZ	1-32	AE		C
LBSHP2162XHZZ	6-6	AE		C
LBSHP2167XHZZ	6-7	AK		C
LBSHP2168XHZZ	6-8	AE		C
LBSHP2174XHZZ	3-10	AE	N	C
LFRM-2265XHZZ	6-9	AU		C
LFRM-2266XHZZ	6-10	AV		C
LFRM-2284XHZZ	3-11	BA	N	C
LFRM-2285XHZZ	3-2	AH	N	C
LFRM-2286XHZZ	5-1	AW	N	C
LFRM-2287XHZZ	1-33	BA	N	C
LHLDZ2295XHZZ	1-18	AE		C
LHLDZ2296XHZA	1-19	AE	N	C
LHLDZ2297XHZZ	6-1	AE		C
LHLDZ2322XHZA	3-12	AE	N	C
LHLDZ2323XHZZ	3-13	AK		C
LPLTG3469XHZZ	2-1	AL	N	C
LPLTG3476XHZZ	4-1	AQ	N	C
LPLTM2924XHFW	4-2	AQ		C
LPLTM3470XHZZ	3-3	AF	N	C
LPLTM3471XHZZ	5-2	AQ	N	C
LPLTM3477XHZZ	1-57	AQ	N	C
LPLTP3084XHZA	7-26	AH	N	C
LPLTP3088XHZA	7-27	AM	N	C
LPLTP3175XHZA	2-2	AD	N	C
LPLTP3257XHZA	2-3	AE		C
LPLTP3257XHZA	2-4	AE		C
LPLTP3348XHZZ	6-11	AG		C
LPLTP3376XHZZ	6-12	AK		C
LPLTP3442XHSA	7-21	AQ		C
LPLTP3475XHZZ	4-3	AE	N	C
LPLTP3483XHZZ	4-4	AP	N	C
LPLTP3486XHSA	7-8	AG	N	C
LPLTP3487XHSA	7-9	AF	N	C
LPLTP3492XHZZ	2-5	AE	N	C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
LPLTP3493XHZZ	3-36	AD	N	C
LX-BZ0956XHZZ	6-B1	AE		C
LX-BZ2138XHZZ	5-B1	AD		C
"	6-B2	AD		C
LX-BZ2205XHZZ	3-B4	AE		C
LX-BZ2222XHZZ	1-B6	AD		C
"	3-B2	AD		C
"	4-B1	AD		C
"	5-B2	AD		C
"	6-B3	AD		C
LX-BZ2241XHZZ	5-B3	AD		C
LX-BZ2282XHZZ	1-B8	AE	N	C
LX-BZ2321XHZZ	1-B3	AE		C
LX-BZ2327XHZZ	1-B4	AF		C
【 M 】				
MARMP2051XHZZ	1-58	AE	N	C
MLEVP2409XHZZ	5-3	AE		C
MLEVP2411XHZZ	6-13	AF		C
MLEVP2412XHZZ	6-14	AF		C
MLEVP2413XHZZ	6-15	AF		C
MLEVP2441XHZA	1-6	AE	N	C
MLEVP2442XHZZ	1-20	AE	N	C
MLEVP2444XHZZ	2-6	AE	N	C
MLEVP2445XHZZ	2-7	AE	N	C
MLEVP2446XHZZ	5-4	AE	N	C
MSPRC2735XHZZ	5-5	AC		C
MSPRC3522XHZZ	1-21	AD		C
MSPRC3528XHZZ	5-6	AE		C
"	6-16	AE		C
MSPRC3530XHZZ	6-41	AD		C
MSPRC3531XHZZ	6-17	AE		C
MSPRC3576XHZZ	1-11	AE		C
MSPRC3590XHZZ	1-34	AE		C
MSPRC3689XHZZ	3-16	AE	N	C
MSPRC3690XHZZ	5-7	AD	N	C
MSPRC3691XHZZ	5-8	AD	N	C
MSPRC3692XHZZ	5-9	AD	N	C
MSPRC3694XHZZ	5-10	AF	N	C
MSPRC3695XHZZ	5-11	AF	N	C
MSPRC3696XHZZ	5-12	AD	N	C
MSPRC3697XHZZ	5-13	AD	N	C
MSPRC3698XHZZ	1-35	AD	N	C
MSPRC3700XHZZ	1-22	AD	N	C
MSPRC3702XHZZ	4-5	AC	N	C
MSPRC3703XHZZ	4-6	AD	N	C
MSPRC3714XHZZ	1-23	AD	N	C
MSPRC3725XHZZ	3-17	AD	N	C
MSPRC3742XHZZ	3-14	AD		C
MSPRC3743XHZZ	3-15	AD		C
MSPRD3399XHZZ	2-10	AE	N	C
MSPRD3529XHZZ	6-19	AE		C
MSPRD3545XHZZ	1-36	AE		C
MSPRD3550XHZZ	1-24	AE		C
MSPRD3632XHZZ	2-8	AE		C
MSPRD3685XHZZ	2-9	AD	N	C
MSPRD3687XHZZ	2-11	AC	N	C
MSPRD3699XHZZ	1-49	AD	N	C
MSPRD3701XHZZ	1-25	AC	N	C
MSPRD3704XHZZ	2-12	AC	N	C
MSPRD3721XHZZ	2-13	AD	N	C
MSPRD3722XHZZ	2-14	AD	N	C
MSPRK3549XHZZ	6-20	AF		C
MSPRK3590XHZZ	6-21	AE		C
MSPRP3123XHZZ	1-16	AC		C
MSPRP3535XHZZ	6-22	AE		C
MSPRP3693XHZZ	5-14	AF	N	C
MSPRP3717XHZZ	3-18	AF	N	C
MSPRT3594XHZZ	6-23	AE		C
MSPRT3712XHZZ	5-15	AC	N	C
MSPRT3713XHZZ	5-16	AD	N	C
MSPRT3718XHZZ	4-7	AD	N	C
【 N 】				
NFANP2005XHZZ	1-37	AY		B
NGERH2365AXZZ	4-8	AD		C
NGERH2410XHZZ	3-19	AB		C
NGERH2458XHZZ	5-17	AB		C
NGERH2466XHZZ	1-50	AE		C
NGERH2576XHZA	6-24	AF		C
NGERH2582XHZA	6-25	AD		C
NGERH2636XHZZ	3-20	AF		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
NGERH2639XHZZ	3-4	AF		C
NGERH2641XHZZ	3-21	AE		C
NGERH2670XHZZ	5-18	AE		C
NGERH2677XHZZ	1-26	AE	N	C
NGERH2678XHZA	6-26	AG		C
NGERH2679XHZZ	6-27	AE		C
NGERH2680XHZZ	6-28	AE		C
NGERH2702XHZZ	3-5	AH		C
NGERH2718XHZZ	3-6	AP		C
NGERH2720XHZZ	3-7	AP		C
NGERH2734XHZZ	3-22	AD	N	C
NGERH2735XHZZ	5-19	AE	N	C
NGERH2736XHZZ	5-20	AE	N	C
NGERH2737XHZZ	5-21	AD	N	C
NGERH2738XHZZ	5-22	AD	N	C
NGERH2739XHZZ	5-23	AD	N	C
NGERH2742XHZZ	5-24	AD	N	C
NGERH2743XHZZ	5-25	AD	N	C
NGERH2744XHZZ	5-26	AD	N	C
NGERH2745XHZZ	5-27	AD	N	C
NGERH2746XHZZ	1-38	AD	N	C
NGERH2747XHZZ	1-39	AE	N	C
NGERH2748XHZZ	1-40	AD	N	C
NGERH2749XHZZ	1-51	AD	N	C
NGERH2754XHZZ	4-9	AE	N	C
NGERH2755XHZZ	5-28	AD	N	C
NGERH2756XHZZ	5-29	AD	N	C
NGERH2757XHZZ	5-30	AE	N	C
NGERP2318XHZZ	3-23	AD		C
NROLP2332XHZA	1-52	AL		C
"	2-15	AL		C
NROLP2334XHZA	1-12	AC		C
NROLP2536XHZZ	6-29	BD		C
NROLR2539XHZZ	6-30	BD		C
NROLR2549XHZZ	3-24	AU		C
NROLR2562XHZZ	3-25	AL	N	C
NROLR2563XHZZ	3-26	AH	N	C
NROLR2564XHZZ	1-41	AP	N	C
NROLR2565XHZZ	1-27	AY	N	C
NSFTP2394XHZZ	3-27	AF		C
NSFTP2422XHZZ	5-31	AD	N	C
NSFTZ2402XHZA	1-13	AK		C
【 P 】				
PBRs-2083XHZZ	1-28	AP	N	C
PBRs-2084XHZZ	1-65	AM	N	C
PBRs-2086XHZZ	2-17	AG	N	C
PGiDM2687XHZZ	1-42	AE		C
PGiDM2688XHZZ	1-43	AE		C
PGiDM2702XHZZ	1-29	AE		C
PGiDM2740XHZZ	2-16	AM	N	C
PGiDM2741XHZZ	3-28	AG	N	C
PGiDM2742XHZZ	3-29	AE	N	C
PGiDM2743XHZZ	3-30	AE	N	C
PGiDM2744XHZZ	1-53	AP	N	C
PGiDM2745XHZZ	1-54	AL	N	C
PGiDM2746XHZZ	4-10	AV	N	C
PGiDM2747XHZZ	4-11	AF	N	C
PGUMM2225XHZZ	1-68	AG		C
PMAGE2056XHZZ	5-32	AQ	N	B
PRDAR2081XHZZ	1-55	AF	N	C
PSEL-2015XHZZ	4-12	AB		C
PSHEP3853XHZZ	6-2	AG		C
PSHEP3988XHZZ	4-14	AD	N	C
PSHEP3997XHZZ	1-70	AE	N	C
PSHEP4001XHZZ	2-38	AC	N	C
PSHEP4002XHZZ	1-69	AE	N	C
PSHEZ3864XHZZ	6-31	AG		C
PSHEZ3867XHZZ	7-24	AE	N	C
PSPA22309XHZZ	3-31	AD	N	C
PSP0-2024XHZZ	6-3	AG		C
PSP0-2029XHZZ	2-35	AD	N	C
PTME-2081XHZZ	6-32	AF		C
PTPEH2149XHZZ	2-32	AD	N	C
PWiR-2038XHZZ	1-64	AQ	N	C
"	3-40	AQ	N	C
【 Q 】				
QACCD2107XHZZ	1-59	AQ	N	E
QCNCM2401SC0B	8-224	AA		C
QCNCM2401SC0D	8-233	AC		C
QCNCM2442SC0B	8-229	AB		C
QCNCM2666XH0B	8-231	AD		C
QCNCM2666XH0D	8-234	AD		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
QCNCM2666XH0E	8-225	AE		C
QCNCM2666XH0G	8-217	AE		C
QCNCM2694XH0C	8-218	AE		C
QCNCM2694XH0E	8-219	AE		C
"	8-232	AE		C
QCNCM2743XH1J	8-228	AF	N	C
QCNCM7014SC0B	8-230	AD		C
QCNCM7014SC0C	8-227	AA		C
QCNCM7014SC0D	8-223	AB		C
QCNCM7014SC0H	8-222	AB		C
QCNCW2556SC1i	8-226	AG		C
QCNTM2062XHZZ	2-26	AM	N	C
QCNTM2063XHZZ	2-27	AQ	N	C
QCNTM2064XHZZ	2-28	AL	N	C
QCNWG202DXHFW	7-28	AP		C
QCNWG370BXHZZ	7-29	AL		C
QCNWN306DXHZZ	2-29	AQ	N	C
QCNWN307DXHZZ	1-7	AF	N	C
QCNWN308DXHZZ	1-60	AF	N	C
QCNWN309DXHZZ	3-32	AL	N	C
QCNWN310DXHZZ	1-44	AF	N	C
QCNWN312DXHZZ	6-33	AF	N	C
QCNWN313DXHZZ	3-33	AH	N	C
QCNWN314DXHZZ	1-45	AH	N	C
QCNWN315DXHZZ	1-46	AH	N	C
QCNWN316DXHZZ	6-34	AH	N	C
QCNWN317DXHZZ	5-33	AF	N	C
QCNWN320DXHZZ	3-37	AF	N	C
QCNWN365CXHZZ	2-34	AD	N	C
"	3-39	AD	N	C
QFS-L1037YCZZ	8-250	AD		A
QFS-L2021XHZZ	8-247	AE		A
QFS-L2025XHZZ	8-248	AE		A
QFS-T2019XHZZ	6-35	AQ		A
QFS-T2027XHZZ	6-4	AQ	N	A
QJAKZ2087XH0B	8-221	AD		C
QJAKZ2090XHZZ	8-220	AT	N	C
QPRTR2001XHZZ	8-249	AF		A
QSW-B2307SCZA	1-47	AG	N	C
QSW-M2343XHZZ	3-34	AN		C
QSW-Z2237XHZZ	5-34	AL		C
QSW-Z2271SCZZ	12-1	AE		C
【 R 】				
RC-EZ3133XHZZ	8-104	AE	N	C
"	8-164	AE	N	C
RCiLF2220XHZZ	8-281	AF	N	C
"	8-282	AF	N	C
RCiLZ0285AFZZ	8-283	AB		C
"	8-284	AB		C
RC-KZ3127XHZZ	8-185	AD	N	C
RC-KZ3132XHZZ	8-193	AG	N	C
"	8-194	AG	N	C
RCRSA2233XHPZ	8-489	AG		B
RCRSP2194XHZZ	8-492	AL		B
RCRSP2237XHZZ	8-491	AK		B
RCRSP2238XHZZ	8-490	AH		B
RDENT2237XHZZ	1-61	BH	N	E
"	9-901	BH	N	E
RDENT2239XHZZ	1-62	BF	N	E
"	10-	BF	N	E
RDTCT2002XHZZ	6-36	AS	N	B
RH-DX1721AFZZ	8-486	AF		B
RH-EX2502XHZZ	8-240	AC		B
"	8-242	AC		B
RH-iX2346XHZZ	8-275	AG		B
RH-iX2411XHZZ	8-268	AG		B
RH-iX2447XHZZ	8-265	AX		B
RH-iX2457XHZZ	8-261	AG		B
RH-iX2461XHZZ	8-262	AH		B
RKiTE2001XHZZ	8-493	BQ	N	B
RLCUB2011XHZZ	2-30	BA	N	B
RLMPU2015XHZA	6-37	BE		B
RMOTS2213XHZZ	3-8	AV	N	B
RMOTS2214XHZZ	5-35	BA	N	B
RTRND2180XHZZ	8-487	AL	N	B
RUNTZ2147XHZZ	3-35	BM		B
【 S 】				
SPAKA504HXHZZ	7-13	AH	N	D
SPAKA505HXHZZ	7-14	AH	N	D
SPAKA506HXHZZ	7-15	AH	N	D
SPAKA507HXHZZ	7-16	AH	N	D
SPAKA509HXHZZ	7-17	AG	N	D

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
SPAKA529HXHZZ	7-18	AF	N	D
SPAKA623HXHZZ	7-19	AD	N	D
SPAKC508HXHTZ	7-12	AY	N	D
SPAKP274HXHZZ	7-11	AQ		D
SPAKP420DXHZZ	7-10	AF	N	D
SSAKA2003XHZZ	7-7	AA		D
SSAKA596HXHZZ	7-22	AD		D
【 T 】				
TCADH3943XHZZ	7-2	AG	N	D
TCADH3984XHZZ	7-4	AF	N	D
TCAUH2041XHZZ	6-38	AG		D
TGANE2417XHZZ	7-5	AD	N	D
TLABH351JXHZZ	6-39	AD		D
TLABH717KXHZZ	4-13	AE	N	D
TLABH719KXHZZ	1-63	AE	N	D
TLABH871KXHZZ	1-66	AF	N	D
TLABP720KXHZZ	7-3	AF	N	D
TLABS870KXHZZ	1-67	AD	N	D
【 U 】				
UBATL2234XHZZ	8-4	AF		B
UDSKA2072XHZZ	7-1	AX	N	D
【 V 】				
VCCCCY1HH470J	8-188	AA		C
VCCCCZ1EH100D	8-56	AA		C
VCCCCZ1EH150J	8-136	AC		C
“	8-166	AC		C
VCCCCZ1EH151J	8-189	AA		C
“	8-190	AA		C
VCCCCZ1EH180J	8-68	AA		C
“	8-137	AA		C
VCCCCZ1EH220J	8-69	AA		C
“	8-196	AA		C
VCCCCZ1EH221J	8-172	AB		C
VCCCCZ1EH270J	8-82	AA		C
VCCCCZ1EH330J	8-89	AC		C
VCCCCZ1EH390J	8-165	AD	N	C
VCCCCZ1EH8R0D	8-51	AA		C
VCCCCZ1HH331J	8-175	AC		C
“	8-180	AC		C
“	8-181	AC		C
VCEAEA1CW226M	8-91	AA		C
VCEAGA1EW107M	8-118	AB		C
VCEAGA1HW106M	8-215	AA		C
VCKRTN2EX473K	8-187	AD	N	C
VCKYCY1AB105K	8-174	AB		C
“	8-205	AB		C
VCKYCY1AB225K	8-197	AB		C
“	8-206	AB		C
VCKYCY1AF105Z	8-52	AC		C
“	8-177	AC		C
VCKYCY1CB104K	8-183	AB		C
“	8-184	AB		C
“	8-186	AB		C
“	8-191	AB		C
“	8-192	AB		C
VCKYCY1CF224Z	8-110	AB		C
VCKYCY1HB103K	8-106	AA		C
“	8-107	AA		C
“	8-108	AA		C
“	8-109	AA		C
“	8-122	AA		C
“	8-123	AA		C
“	8-124	AA		C
“	8-125	AA		C
“	8-198	AA		C
VCKYCY1HB222K	8-207	AA		C
VCKYCY1HB682K	8-153	AA		C
“	8-154	AA		C
VCKYCY1HF104Z	8-90	AA		C
“	8-95	AA		C
“	8-103	AA		C
“	8-111	AA		C
“	8-120	AA		C
VCKYCZ0JF105Z	8-85	AC		C
“	8-148	AC		C
“	8-149	AC		C
“	8-151	AC		C
“	8-163	AC		C
VCKYCZ1CB103K	8-139	AA		C
“	8-140	AA		C
“	8-157	AA		C
“	8-158	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
“	8-167	AA		C
“	8-176	AA		C
VCKYCZ1CB223K	8-159	AB		C
“	8-182	AB		C
VCKYCZ1CF104Z	8-32	AB		C
“	8-33	AB		C
“	8-34	AB		C
“	8-35	AB		C
“	8-36	AB		C
“	8-37	AB		C
“	8-38	AB		C
“	8-39	AB		C
“	8-40	AB		C
“	8-41	AB		C
“	8-42	AB		C
“	8-43	AB		C
“	8-44	AB		C
“	8-45	AB		C
“	8-46	AB		C
“	8-47	AB		C
“	8-48	AB		C
“	8-49	AB		C
“	8-50	AB		C
“	8-54	AB		C
“	8-57	AB		C
“	8-58	AB		C
“	8-59	AB		C
“	8-60	AB		C
“	8-61	AB		C
“	8-63	AB		C
“	8-65	AB		C
“	8-66	AB		C
“	8-72	AB		C
“	8-73	AB		C
“	8-74	AB		C
“	8-75	AB		C
“	8-76	AB		C
“	8-77	AB		C
“	8-78	AB		C
“	8-79	AB		C
“	8-80	AB		C
“	8-81	AB		C
“	8-83	AB		C
“	8-84	AB		C
“	8-86	AB		C
“	8-87	AB		C
“	8-88	AB		C
“	8-92	AB		C
“	8-93	AB		C
“	8-94	AB		C
“	8-96	AB		C
“	8-99	AB		C
“	8-113	AB		C
“	8-119	AB		C
“	8-129	AB		C
“	8-130	AB		C
“	8-131	AB		C
“	8-142	AB		C
“	8-143	AB		C
“	8-144	AB		C
“	8-145	AB		C
“	8-150	AB		C
“	8-152	AB		C
“	8-155	AB		C
“	8-156	AB		C
“	8-161	AB		C
“	8-168	AB		C
“	8-170	AB		C
“	8-171	AB		C
“	8-178	AB		C
“	8-199	AB		C
“	8-201	AB		C
“	8-203	AB		C
“	8-209	AB		C
“	8-210	AB		C
“	8-212	AB		C
“	8-213	AB		C
“	8-214	AB		C
“	8-216	AB		C
VCKYCZ1EB102K	8-31	AA		C
“	8-53	AA		C
“	8-55	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
"	8-67	AA		C
"	8-71	AA		C
"	8-97	AA		C
"	8-98	AA		C
"	8-100	AA		C
"	8-101	AA		C
"	8-102	AA		C
"	8-105	AA		C
"	8-114	AA		C
"	8-115	AA		C
"	8-116	AA		C
"	8-117	AA		C
"	8-121	AA		C
"	8-132	AA		C
"	8-133	AA		C
"	8-134	AA		C
"	8-135	AA		C
"	8-147	AA		C
VCKY CZ1EB222K	8-200	AB		C
VCKY CZ1EB391K	8-202	AD		C
VCKY CZ1EB471K	8-30	AD		C
VCKY CZ1EB472K	8-179	AA		C
VCKY CZ1HB681K	8-126	AA		C
"	8-127	AA		C
VCKY TV1AF106Z	8-62	AC		C
"	8-64	AC		C
"	8-70	AC		C
"	8-112	AC		C
"	8-128	AC		C
"	8-138	AC		C
"	8-141	AC		C
"	8-146	AC		C
"	8-160	AC		C
"	8-162	AC		C
"	8-169	AC		C
"	8-173	AC		C
"	8-195	AC		C
"	8-208	AC		C
"	8-211	AC		C
VCKY TV1HF104Z	8-412	AA		C
VCKY TV1HF105Z	8-204	AA		C
VHD1SS301+-1	8-241	AD	N	B
VHD1SS302F+-1	8-236	AF		B
"	8-237	AF		B
VHD1SS352F+-1	8-238	AF		B
"	8-239	AF		B
"	8-244	AF		B
"	8-246	AF		B
VHDBR715F//-1	8-243	AF		B
VHDSS16///-1	8-245	AF		B
VHi25V016CS-1	8-253	AX		B
"	8-255	AX		B
"	8-256	AX		B
"	8-257	AX		B
VHi421A380N-1	8-259	AF	N	B
VHi48033BF+-1	8-270	AF	N	B
VHi74VH573T-1	8-267	AG	N	B
VHi7WH74FKF-1	8-264	AF	N	B
VHiA3967SLB-1	8-266	AW	N	B
VHiEDS2516A-1	8-254	AF	N	B
VHiLAN9118+-1	8-269	BA	N	B
VHiLM393LS+-1	8-263	AE	N	B
VHiMC34119L-1	8-272	AN		B
VHiTC7PA53F-1	8-276	AG		B
VHiVHC138FT-1	8-258	AF	N	B
VHiVHCT00AT-1	8-260	AF	N	B
VHPGP1S094HCZ	11-2	AG		B
VHPSG206S//-1	11-1	AG		B
VHPSG2482A+-1	6-40	AN		B
VHVRA391PV6-1	8-1	AE		B
VHVRA501PC6-1	8-2	AG		B
"	8-3	AG		B
VHVTND5V331-1	8-488	AF	N	B
VRS-CG1JF101J	8-5	AA		C
"	8-6	AA		C
"	8-7	AA		C
"	8-9	AA		C
"	8-11	AA		C
"	8-12	AA		C
"	8-13	AA		C
"	8-14	AA		C
"	8-15	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
"	8-16	AA		C
"	8-17	AC		C
"	8-19	AA		C
"	8-20	AA		C
VRS-CG1JF103J	8-18	AC		C
"	8-21	AC		C
"	8-25	AC		C
"	8-26	AC		C
"	8-27	AC		C
"	8-28	AC		C
"	8-29	AC		C
VRS-CG1JF330J	8-8	AC		C
"	8-10	AC		C
"	8-22	AC		C
VRS-CG1JF333J	8-23	AC		C
"	8-24	AC		C
VRS-CY1JB000J	8-235	AA		C
"	8-278	AA		C
"	8-316	AA		C
"	8-374	AA		C
"	8-375	AA		C
"	8-424	AA		C
"	8-425	AA		C
"	8-443	AA		C
"	8-452	AA		C
"	8-476	AA		C
"	8-479	AA		C
"	8-480	AA		C
VRS-CY1JB100F	8-405	AC	N	C
VRS-CY1JB100J	8-370	AA		C
VRS-CY1JB101J	8-453	AA		C
VRS-CY1JB111J	8-456	AB	N	C
VRS-CY1JB154F	8-445	AC	N	C
"	8-462	AC	N	C
VRS-CY1JB2R0J	8-277	AD		C
VRSCY1JB3011F	8-464	AA		C
"	8-471	AA		C
VRSCY1JB3R01F	8-454	AC	N	C
"	8-455	AC	N	C
VRSCY1JB49R9F	8-403	AG		C
"	8-404	AG		C
"	8-407	AG		C
"	8-408	AG		C
VRS-CZ1JB000J	8-279	AA		C
"	8-280	AA		C
"	8-301	AA		C
"	8-305	AA		C
"	8-309	AA		C
"	8-312	AA		C
"	8-313	AA		C
"	8-323	AA		C
"	8-326	AA		C
"	8-390	AA		C
"	8-391	AA		C
"	8-394	AA		C
"	8-427	AA		C
"	8-428	AA		C
"	8-435	AA		C
"	8-467	AA		C
"	8-474	AA		C
"	8-485	AA		C
VRS-CZ1JB100J	8-332	AA		C
"	8-339	AA		C
"	8-369	AA		C
"	8-371	AA		C
VRS-CZ1JB101J	8-300	AA		C
"	8-302	AA		C
"	8-304	AA		C
"	8-306	AA		C
"	8-307	AA		C
"	8-325	AA		C
"	8-334	AA		C
"	8-335	AA		C
"	8-338	AA		C
"	8-344	AA		C
"	8-365	AA		C
"	8-367	AA		C
"	8-368	AA		C
"	8-397	AA		C
"	8-416	AA		C
"	8-417	AA		C
"	8-419	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-CZ1JB102J	8-337	AA		C
"	8-376	AA		C
"	8-401	AA		C
"	8-438	AA		C
"	8-469	AA		C
"	8-477	AA		C
"	8-484	AA		C
VRS-CZ1JB103J	8-308	AA		C
"	8-318	AA		C
"	8-324	AA		C
"	8-328	AA		C
"	8-331	AA		C
"	8-333	AA		C
"	8-336	AA		C
"	8-341	AA		C
"	8-358	AA		C
"	8-360	AA		C
"	8-364	AA		C
"	8-366	AA		C
"	8-372	AA		C
"	8-373	AA		C
"	8-377	AA		C
"	8-381	AA		C
"	8-387	AA		C
"	8-388	AA		C
"	8-392	AA		C
"	8-393	AA		C
"	8-406	AA		C
"	8-409	AA		C
"	8-410	AA		C
"	8-418	AA		C
"	8-426	AA		C
"	8-429	AA		C
"	8-430	AA		C
"	8-431	AA		C
"	8-440	AA		C
"	8-461	AA		C
"	8-463	AA		C
"	8-481	AA		C
VRS-CZ1JB104J	8-315	AA		C
"	8-340	AA		C
"	8-354	AA		C
"	8-433	AA		C
VRS-CZ1JB105J	8-317	AD		C
"	8-350	AD		C
"	8-357	AD		C
"	8-396	AD		C
VRS-CZ1JB122J	8-322	AA		C
VRS-CZ1JB123J	8-379	AD		C
VRS-CZ1JB132J	8-441	AD		C
VRS-CZ1JB133J	8-380	AC		C
"	8-473	AC		C
VRS-CZ1JB151J	8-421	AA		C
"	8-423	AA		C
VRS-CZ1JB154J	8-348	AD		C
VRS-CZ1JB201J	8-442	AA		C
VRS-CZ1JB203J	8-353	AD		C
"	8-361	AD		C
"	8-436	AD		C
VRS-CZ1JB222J	8-314	AD		C
"	8-329	AD		C
"	8-346	AD		C
"	8-347	AD		C
"	8-351	AD		C
"	8-458	AD		C
VRS-CZ1JB224J	8-432	AA		C
"	8-437	AA		C
VRS-CZ1JB225J	8-310	AA		C
VRS-CZ1JB244J	8-422	AD		C
VRS-CZ1JB303J	8-352	AD		C
"	8-362	AD		C
"	8-384	AD		C
"	8-385	AD		C
"	8-434	AD		C
VRS-CZ1JB330J	8-303	AA		C
"	8-319	AA		C
"	8-320	AA		C
"	8-321	AA		C
"	8-343	AA		C
"	8-386	AA		C
"	8-395	AA		C
"	8-411	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
"	8-413	AA		C
VRS-CZ1JB331J	8-398	AA		C
VRS-CZ1JB332J	8-330	AA		C
"	8-382	AA		C
"	8-466	AA		C
"	8-470	AA		C
VRS-CZ1JB333J	8-389	AA		C
"	8-420	AA		C
VRS-CZ1JB393J	8-465	AD		C
"	8-472	AD		C
VRS-CZ1JB472J	8-327	AA		C
"	8-349	AA		C
"	8-356	AA		C
"	8-439	AA		C
"	8-478	AA		C
VRS-CZ1JB474J	8-459	AD		C
VRS-CZ1JB511J	8-460	AB		C
VRS-CZ1JB562J	8-355	AA		C
VRS-CZ1JB752F	8-311	AC	N	C
"	8-345	AC	N	C
VRS-CZ1JB823J	8-468	AD		C
VRS-HT3AAR22J	8-359	AA		C
"	8-363	AA		C
VRS-HT3DA470J	8-342	AA		C
VRS-TP2BD000J	8-482	AA		C
VRS-TP2BD101J	8-483	AA		C
VRS-TV2AB000J	8-400	AA		C
"	8-414	AA		C
"	8-415	AA		C
VRS-TV2AB123F	8-399	AC	N	C
VRSTV2AB1242F	8-402	AC	N	C
VRSTV2AB2373F	8-447	AC	N	C
VRSTV2AB6814F	8-444	AC	N	C
"	8-446	AC	N	C
VRS-TV2ABR22J	8-378	AC	N	C
"	8-383	AC	N	C
VRS-TW2ED151J	8-475	AB	N	C
VRS-TW2ED9R1F	8-457	AC	N	C
VRS-TX2HD281F	8-448	AD	N	C
"	8-449	AD	N	C
"	8-450	AD	N	C
"	8-451	AD	N	C
VS2SA2059+-1	8-285	AH		B
VS2SC2712GR-1	8-291	AB		B
VS2SC4548+-1	8-294	AF	N	B
"	8-295	AF	N	B
"	8-296	AF	N	B
"	8-297	AF	N	B
VSKTC3198GR-1	8-298	AD		B
VSRN1406F+-1	8-292	AF		B
"	8-293	AF		B
"	8-299	AF		B
VSRN1702F+-1	8-286	AF		B
"	8-287	AF		B
VSRN2406YF+-1	8-289	AF		B
VSRT5N234CT-1	8-288	AD	N	B
"	8-290	AD	N	B
【 X 】				
XBPS730P08KS0	6-B4	AB		C
XEBS720P06000	2-B1	AC		C
XEBS720P10000	3-B3	AE		C
XEBS726P08000	1-B9	AE	N	C
"	2-B2	AE		C
"	3-B5	AE		C
XEBS730P08000	1-B1	AC		C
XEBS730P10000	1-B2	AC		C
"	2-B3	AC		C
"	3-B1	AC		C
"	5-B4	AC		C
"	6-B5	AC		C
XEBS730P12000	1-B11	AC		C
XEBS730P34000	1-B5	AD	N	C
XHBS730P06000	1-B10	AC		C
XHBS730P08000	1-B7	AB		C
"	5-B5	AB		C
XNGS730-18000	6-N1	AD		C
XWHS740-08100	1-W1	AA		C
【 O 】				
OKY0MPS902200	9-50	AF		C
"	9-51	AF		C
OKYC1076QQ103	9-6	AL		C
"	9-11	AL		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
0KYC10A9RQ102	9-16	AH	N	C
0KYC10A9RQ221	9-7	AG		C
0KYC1131EC101	9-10	AC		C
0KYC1133EC104	9-15	AC	N	C
"	9-19	AC	N	C
0KYC1330EC103	9-8	AC	N	C
"	9-12	AC	N	C
"	9-20	AC	N	C
"	9-21	AC	N	C
0KYC1330EC472	9-9	AC	N	C
0KYC1384QS332	9-5	AG		C
0KYC2131QS224	9-2	AK		C
"	9-3	AK		C
0KYC30A0BQ331	9-18	AK		C
0KYC30A0DQ102	9-13	AR	N	C
0KYC30A0DQ330	9-14	AG		C
0KYC30A0DQ560	9-17	AG		C
0KYC3160KS221	9-4	AT	N	C
0KYD1057AQ006	9-32	AF		B
"	9-33	AF		B
"	9-34	AF		B
"	9-35	AF		B
"	9-36	AF		B
"	9-37	AF		B
0KYD2066AQ006	9-42	AH		B
0KYD20Q0AQ003	9-43	AL		B
"	9-44	AL		B
0KYD2116AC008	9-28	AE		B
"	9-30	AE		B
"	9-31	AE		B
"	9-45	AE		B
0KYD3101AA010	9-38	AL		B
"	9-39	AL		B
0KYD4103AC008	9-41	AE		B
0KYD4103AC013	9-29	AG		B
0KYD4103AC041	9-27	AE	N	B
0KYD4145AA005	9-40	AK		B
0KYD5107AL002	9-129	AS	N	B
0KYD7102AR4R0	9-73	AN		B
0KYD7112AR002	9-131	AK	N	B
0KYH7151AS001	9-75	AW		B
0KYH7152AS001	9-74	AL		B
"	9-76	AL		B
0KYK2014LQ010	9-24	AN	N	C
0KYK2051AQ002	9-22	AG		C
"	9-25	AG		C
0KYK2061AQ002	9-23	AF		C
0KYK2148LS005	9-26	AG		C
0KYK3104AL001	9-125	AU		B
0KYK7135AS007	9-46	AN	N	A
0KYK7144AR002	9-49	AN	N	A
0KYK7144AR005	9-47	AL		A
"	9-48	AL		A
0KYL1120RS400	9-72	AU	N	C
0KYL1179JL193	9-71	AS	N	C
0KYL2100DS169	9-128	BA	N	B
0KYL5051AQ001	9-1	AE		C
0KYM1108AZ001	9-126	AE		C
"	9-127	AE		C
0KYR3062UQ100	9-94	AL		C
0KYR3113VC101	9-87	AC	N	C
"	9-108	AC	N	C
0KYR3113VC102	9-107	AC	N	C
0KYR3113VC103	9-121	AC	N	C
"	9-122	AC	N	C
"	9-123	AC	N	C
0KYR3113VC223	9-90	AC	N	C
0KYR3113VC333	9-86	AC	N	C
0KYR3113VC334	9-109	AC		C
0KYR3113VC473	9-124	AC	N	C
0KYR3113VC561	9-91	AC	N	C
0KYR3113VC681	9-92	AC	N	C
0KYR3113VC682	9-88	AC	N	C
0KYR3116VC102	9-112	AC	N	C
0KYR3116VC123	9-110	AC	N	C
0KYR3116VC183	9-83	AC	N	C
0KYR3116VC682	9-111	AC	N	C
0KYR3116VC822	9-89	AC	N	C
0KYR3123TC103	9-102	AC	N	C
"	9-103	AC	N	C
0KYR3123TC151	9-97	AC	N	C
0KYR3123TC221	9-85	AC	N	C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
0KYR3123TC393	9-98	AC	N	C
"	9-99	AC	N	C
"	9-100	AC	N	C
"	9-101	AC	N	C
0KYR3126TC184	9-81	AB		C
"	9-82	AB		C
0KYR3133AC100	9-95	AC	N	C
"	9-96	AC	N	C
0KYR3133AC330	9-93	AC	N	C
0KYR3133AC334	9-104	AC	N	C
"	9-105	AC	N	C
"	9-106	AC	N	C
0KYR3133AC472	9-117	AC	N	C
"	9-118	AC	N	C
"	9-119	AC	N	C
"	9-120	AC	N	C
0KYR3133AC561	9-84	AC	N	C
0KYR3133AC562	9-113	AC	N	C
"	9-114	AC	N	C
"	9-115	AC	N	C
"	9-116	AC	N	C
0KYR8054EQ502	9-130	AG		C
0KYT1020NC001	9-80	AG		B
0KYT3561KL001	9-77	AT		B
0KYT4081CC002	9-79	AF		B
0KYT4097CC002	9-78	AG		B
0KYW0000AQ005	9-59	AC		C
"	9-61	AC		C
0KYW0000AQ007	9-52	AC		C
"	9-54	AC		C
"	9-60	AC		C
"	9-62	AC		C
"	9-63	AC		C
"	9-65	AC		C
"	9-66	AC		C
"	9-67	AC		C
"	9-68	AC		C
0KYW0000AQ010	9-69	AC		C
0KYW0000AQ015	9-56	AC		C
"	9-57	AC		C
"	9-58	AC		C
"	9-64	AC		C
"	9-70	AC		C
0KYW0000AQ020	9-53	AC	N	C
"	9-55	AC	N	C

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